



Rocky Flats Environmental Technology Site

RECONNIASSINACE LEVEL CHARACTERIZATION

CHEMICAL CHARACTERIZATION PLAN (PACKAGE)

865 CLUSTER CLOSURE PROJECT

(Buildings: 865, 866, 867 and 868)

REVISION 1

July 18, 2001

Reviewed for Classification/UCNI/0110

By: Janet Nesheim, Derivative Classifier

DOE, EMCBC

Date: 10-13-08

Confirmed Unclassified, Not UCNI, Not 0110

Prepared by: David Babbs
David Babbs, Industrial Hygiene

Date: 7/18/01

Prepared by: Math Shafer
Math Shafer, Environmental Compliance

Date: 07/18/01

Reviewed by: Steve Luker
Steve Luker, Quality Assurance

Date: 7/18/01

Reviewed by: Duane Parsons
Duane Parsons, Characterization Coordinator

Date: 7/18/01

Approved by: K.A. Dorr
K.A. Dorr, KH Closure Project Manager

Date: 7/19/01



Page 1 of 5
0110 7/21/01

ADMIN RECC7D

B865-A-000016

134 DOCUMENT CLASSIFICATION
REVIEW WAIVER PER
CLASSIFICATION OFFICE

RLC CHEMICAL CHARACTERIZATION PLAN (PACKAGE)

BUILDING(s): 865, 866, 867, and 868

Assumptions and Notes:

- This characterization package was prepared in accordance with MAN-077-DDCP, D&D Characterization Protocols, and Appendix D, Reconnaissance Level Characterization Plan for D&D Facilities, April 23, 2001
- RLCP Data Quality Objectives were used to develop this characterization package
- Data already exists for some contaminants of concern, only RLC data gaps are specified in this characterization plan. If areas are discovered during the removal plates, covers, etc. as the RLC progresses, these areas will be sampled as required. The 865 Cluster RLCR will report both existing data results and newly acquired RLC data results.
- Components of RCRA Units were not considered within the scope of this RLC Plan since they are covered under the RCRA Closure Program. All RCRA permitted units in B865 have been characterized by the permitting process (i.e., approved waste codes). All RCRA units that have not been previously closed, will be closed in accordance with closure requirements specified in the Closure Plan, Section X, of the RCRA Part B Permit, which are also delineated in the RFCA RSOP for Component Removal, Decontamination and Size Reduction. Therefore, no additional chemical sampling is required for characterization of RCRA units and their components.
- It is assumed that demolition debris will either be disposed of as PCB Bulk Product Waste or sampled during in-process characterization once site protocols are established based on current discussions with the Lead Regulatory Agencies concerning Building 111. Therefore painted concrete surfaces will not be sampled for PCBs in paint during the RLC. If it is later determined that concrete demolition debris will be used for onsite recycled fill material, then additional PCB sampling will take place during in-process characterization.
- Lead sampling is not required in the 865 Cluster. All paint will remain a part of the infrastructure during demolition and therefore does not require sampling per Environmental Waste Compliance Guidance No. 27, Lead Based Paint (LBP) and LBP Debris Disposal. Sampling for lead for IH requirements will be at the discretion of the demolition contractor.
- It is assumed that all potential materials that could contain ACM in B865 do contain ACM, therefore no additional asbestos sampling will be performed in B865.
- It is assumed that all facility systems are potentially contaminated and will be disposed of as LLW or LLMW and will not affect the facility typing determination. Therefore, only exterior surfaces of facility system piping, ducting, conduit, plenums, equipment, etc. will be considered during the RLC.
- Only facilities that are anticipated to be Type 2 facilities were considered in this RLC Plan. Anticipated Type 1 facilities (i.e., B827, C865, and Tank 25) will be characterized as part of the Type 1 facility RLC/PDS effort later in the project schedule.

Instructions:

- 1 Verify characterization activities are on the Plan-of-the-Day (POD)
- 2 Perform a Pre-Evolution Brief and/or Job Task Brief in accordance with the Site Conduct of Operations Manual
- 3 Verify personnel have appropriate training for the applicable tasks they will be performing
- 4 Comply with RWP and Beryllium Work Form (BWF) requirements, if applicable
- 5 Comply with facility PPE requirements, as applicable
- 6 Inform the Facility Manager, or designee prior to starting characterization activities

WARNING

Confined space entry is NOT authorized during the performance of this plan (package)

- 7 Follow applicable characterization and sampling procedures
- 8 Have D&D craft perform the following, as required
 - Lift deck grating and access covers to assist in obtaining samples in trenches, pits and sumps Use forklift with approved lift attachment, as necessary
 - Cut (using sawsall) deck grating and access covers, if necessary, to assist in obtaining samples in trenches, pits & sumps
 - Assist in accessing ventilation ducts for sampling, including removal of duct tape over the ends of ventilation pipes and entry into fan plenum(s)
- 9 Notify Wackenhut Security (x2444) and the Shift Supervisor (x2914), and verify appropriate safety precautions/requirements are followed prior to accessing facility roofs
- 10 Coordination with the Environmental Restoration Program organization will be required to further characterize soils around and underneath facility foundations and slabs prior to removal
- 11 Collect and maintain all characterization paperwork in the Characterization Closure Project File(s), and all electronic data in the appropriate D&D RISS subdirectory

ASBESTOS		
Sample Location	Number of Samples	Sample location and justification/rational
865	0	It is assumed that all potential materials that could contain asbestos in 865 do contain asbestos, therefore no additional asbestos sampling will be performed in 865
866, 867 and 868	2	In Buildings 867 and 868, no building materials suspected of containing asbestos were located. These buildings are constructed of concrete pads & footers with a steel I-beam skeleton. The walls and roof are composed of corrugated metal with fiberglass batt insulation. The air handling units have rubber expansion joints. No thermal systems insulation or spray-on surfacing materials were observed. Therefore, no asbestos bulk samples were taken. Building 866 has the following suspected asbestos containing building materials: corrugated, transite panels that form two external, protective walls at the entry to the building (88 sf), and above the double-door entry are (13) hard fittings (<6" OD) and 2-runs of steam and condensate piping (<6" OD) with fiberglass insulation and a white canvas covering. These steam lines enter from the top of the north wall. One core asbestos sample was taken from a condensate fitting, and one sample was taken of the canvas wrap.
Total Samples	2	Sample locations are specified on sample maps during characterization efforts. Samples were obtained in accordance with PRO-653-ACPR, Asbestos Characterization Procedure and 40 CFR 763

BERYLLIUM		
Sample Location	Number of Samples (smears)	Sample location and justification/rational
865	30	There is sufficient supporting sample data and process history that proves beryllium was used, stored and contained in this building. Hundreds of samples have already been collected throughout the facility, both random and biased. Therefore, only a limited number of biased sampling will be collected to further characterize data gaps in areas that are lacking supporting sample data such as trenches, pits, and sumps.
866, 867 and 868	21	There is sufficient process history that proves beryllium was used, stored and contained in these buildings. Therefore, random samples will be obtained at locations specified on the sample maps.
Total Samples	51	Samples will be obtained at locations specified on sample map(s) in accordance with PRO-536-BCPR, Beryllium Characterization Procedure. Biased sample locations will correspond with the most probable areas of dust accumulation (including beryllium dust), assuming airborne deposition.

4

RCRA/CERCLA CONSTITUENTS		
Sample Location	Number of Samples	Sample location and justification/rational
B865 Room 145	1 liquid sample	<p>Based on historical process information, no unremediated spills have occurred, and visual observations revealed only one sample location the grate covered trench located in the east central portion of Room 145 (north of Room 145A) which contained used machinery oil. The trench oil was pumped out into two 55-gallon drums. No sludge was present in the trench after the used oil was removed, therefore, no sludge sample could be collected. An RLC sample of the used oil was collected from one of the 55-gallon drums and analysed for all toxicity characteristic contaminants (40 CFR 261.24, Table 1).</p> <p>No other RLC sampling locations were identified in B865 at this time. However, not all areas were accessible for inspection (e.g., floor pits and trenches in B865 that are currently covered with steel plating) and will therefore be evaluated for characterization during the steel plate removal activities for radiological RLC efforts.</p>
B866, B867 and B868	0	Based on historical process information, no unremediated spills are known to have occurred in these buildings and visual observation of accessible areas indicated no evidence of spills (e.g., staining). Therefore, no RLC sampling locations were identified in these buildings at this time.
Total Samples	1	Samples will be obtained at locations specified on sample map(s) in accordance with PRO-488-BLCR, Bulk Solids and Liquids Characterization Procedure. Samples shall be analyzed for all toxicity characteristic contaminants (40 CFR 261.24, Table 1).

PCBs		
Sample Location	Number of Samples	Sample location and justification/rational
865 Cluster	0	Based on historical process information, no unremediated PCB spills have occurred in these buildings and visual observation of accessible areas indicated no evidence of spills (e.g., staining). Therefore, no RLC sampling locations were identified in these buildings at this time.
Total Samples	0	

* PCB ballasts, fluorescent light bulbs, potential mercury switches in thermostats, and mercury vapor light bulbs will be identified and removed prior to demolition.

5



Rocky Flats Environmental Technology Site

RECONNAISSANCE LEVEL CHARACTERIZATION

CHEMICAL CHARACTERIZATION PLAN
(PACKAGE)

865 CLUSTER CLOSURE PROJECT
(Buildings: 865, 866, 867 and 868)

REVISION 0

May 18, 2001

Prepared by: *Andre Gonzalez* Date: 5-17-01
Andre Gonzalez, Industrial Hygiene

Prepared by: *Mark Shafer* Date: 05/18/01
Mark Shafer, Environmental Compliance

Reviewed by: *Steve Luker* Date: 5/23/01
Steve Luker, Quality Assurance

Reviewed by: *Duane Parsons* Date: 5/23/01
Duane Parsons, Characterization Coordinator

Approved by: *Kent Dorr* Date: 5/23/01
Kent Dorr, KH Closure Project Manager

Superseded by Rev 1, dated 7/18/01
PAT
7/27/01

RLC CHEMICAL CHARACTERIZATION PLAN (PACKAGE)

BUILDING(s) 865 Cluster

- This characterization package was prepared in accordance with MAN-077-DDCP, D&D Characterization Protocols, and Appendix D, Reconnaissance Level Characterization Plan for D&D Facilities, April 23, 2001
- RLCP Data Quality Objectives were used to develop this characterization package
- Data already exists for some contaminants of concern, only RLC data gaps are specified in this characterization plan. The 865 Cluster RLCR will report both existing data results and newly acquired RLC data results
- Components of RCRA Units were not considered within the scope of this RLC Plan since they are covered under the RCRA Closure Program
- Grating and metal floor plates that cannot be easily lifted by two sampling personnel will be sampled during in-process characterization
- It is assumed that demolition debris will either be disposed of as PCB Bulk Product Waste or sampled during in-process characterization once site protocols are established based on current discussions with the Lead Regulatory Agencies concerning Building 111. Therefore painted concrete surfaces will not be sampled for PCBs in paint during the RLC. If it is later determined that concrete demolition debris will be used for onsite recycled fill material, then additional PCB sampling will take place during in-process characterization
- Lead sampling is not required in the 865 Cluster. All paint will remain a part of the infrastructure during demolition and therefore does not require sampling per Environmental Waste Compliance Guidance No. 27, Lead Based Paint (LBP) and LBP Debris Disposal. Sampling for lead for IH requirements will be at the discretion of the demolition contractor
- Only facilities that are anticipated to be Type 2 facilities were considered in this RLC Plan. Anticipated Type 1 facilities will be characterized as part of the Type 1 facility RLC/PDS effort later in the project schedule

Instructions

1. Verify characterization activities are on the Plan-of-the-Day (POD)
2. Perform a Pre-Evolution Brief and/or Job Task Brief in accordance with the Site Conduct of Operations Manual
3. Verify personnel have appropriate training for the applicable tasks they will be performing
4. Comply with RWP requirements, if applicable
5. Comply with JHA and facility PPE requirements, as applicable
6. Inform the Facility Manager, or designee prior to starting characterization activities
7. Follow applicable characterization and sampling procedures
8. Notify Wackenhut Security (x2444) and the Shift Supervisor (x2914), and verify appropriate safety precautions/requirements are followed prior to accessing facility roofs
9. Coordination with the Environmental Restoration Program organization will be required to further characterize soils around and underneath facility foundations and slabs prior to removal
10. Collect and maintain all characterization paperwork in the Characterization Closure Project File(s), and all electronic data in the appropriate D&D RISS subdirectory

Superseded by Rev 1, dated 7/18/01.
DAP 7/27/01

ASBESTOS		
Sample Location	Estimated Number of Samples	Sample location and justification/rational
865 Cluster	200	A comprehensive asbestos building inspection has not been performed. Therefore, suspect locations will be sampled during a comprehensive asbestos building inspection of all 865 Cluster buildings.
Total Samples	200	The exact sample numbers and locations cannot be determined until a comprehensive, invasive inspection is performed in accordance with 40 CFR Part 763, Subpart E. Sample locations will be specified on sample maps during characterization efforts. Samples will be obtained in accordance with PRO-653-ACPR, Asbestos Characterization Procedure and 40 CFR 763.

BERYLLIUM		
Sample Location	Number of Samples (smears)	Sample location and justification/rational
865, 866, 867 and 868	0	There is sufficient supporting sample data and process history that proves beryllium was used, stored and contained in these buildings. Recently collected sample data satisfies the RLCR requirements and will be reported in the 865 Cluster RLCR. Therefore, no additional sampling is necessary.
Total Samples	0	

RCRA/CERCLA CONSTITUENTS		
Sample Location	Number of Samples	Sample location and justification/rational
B865 Room 145	1 sample location, 2 liquid samples & 2 sludge samples (if present)	<p>This facility was used for research and development of non-plutonium metals. Primary activities pertained to metalworking. Process waste was generated and stored during its operating history. Based on historical process information, no unremediated spills have occurred, and visual observations revealed only one candidate sample location: the grate covered pit located in the east central portion of Room 145 (north of Room 145A). A hazardous waste drum storage area was once located in room 145. RLC sampling requirements for Room 145 pit are as follows: two liquid samples and two sludge samples (if present) and analyzed for all toxicity characteristic contaminants (40 CFR 261.24, Table 1). The samples will be taken at each end of the pit.</p> <p>No other RLC sampling locations were identified in B865 at this time. However, not all areas were accessible for inspection (e.g., floor pits and trenches in B865 that are currently covered with steel plating) and will therefore be characterized during in-process D&D activities. It is recognized that during in-process D&D activities evidence of past spills may become apparent. Although in-process sampling is outside the scope of this RLC Plan, in-process samples should be collected in floor pits, trenches and any other area that becomes assessable during in-process D&D that has evidence of past spills.</p>

Superseded by Rev 1, dated 7/18/01.
DMP 7/27/01

RCRA/CERCLA CONSTITUENTS – Continued		
B866, B867 and B868	0	<p>These buildings make-up the B865 Cluster and provide a variety of support functions. Based on historical process information, no unremediated spills have occurred in these buildings and visual observation of accessible areas indicated no evidence of spills (e.g., staining). Therefore, no RLC sampling locations were identified in these buildings at this time.</p> <p>It is recognized that during in-process D&D activities evidence of past spills <i>may</i> become apparent and will be sampled at that time.</p>
Total Samples	4	Samples will be obtained at locations specified on sample map(s) in accordance with PRO-488-BLCR, Bulk Solids and Liquids Characterization Procedure. Samples shall be analyzed for all toxicity characteristic contaminants (40 CFR 261.24, Table 1).

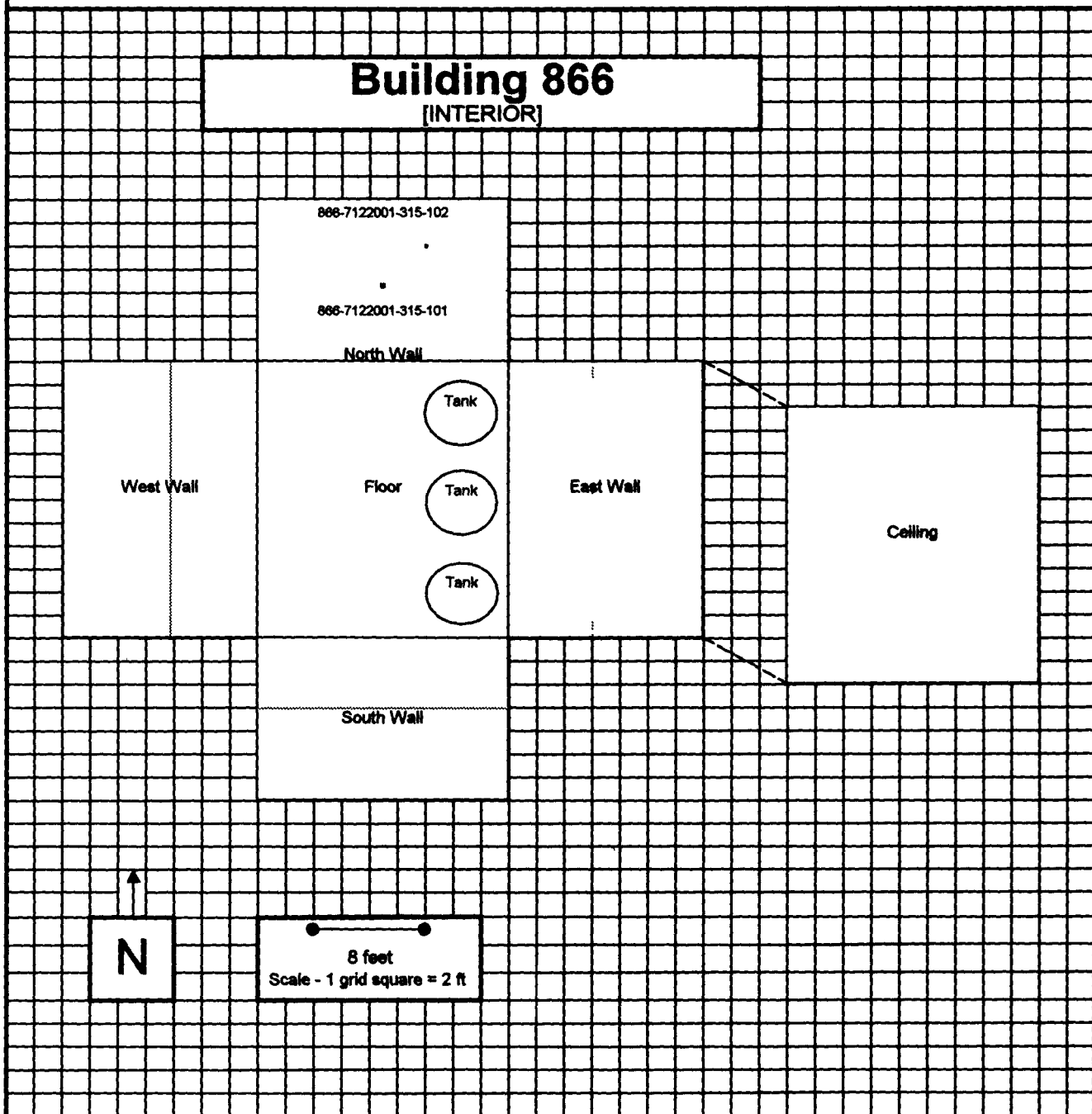
PCBs		
Sample Location	Number of Samples	Sample location and justification/rational
865 Cluster	0	<p>Based on historical process information, no unremediated PCB spills have occurred in these buildings and visual observation of accessible areas indicated no evidence of spills (e.g., staining). Therefore, no RLC sampling locations were identified in these buildings at this time.</p> <p>It is recognized that during in-process D&D activities evidence of past spills <i>may</i> become apparent and will be sampled at that time.</p>
Total Samples	0	

* PCB ballasts, fluorescent light bulbs, potential mercury switches in thermostats, and mercury vapor light bulbs will be identified and removed prior to demolition.

Superseded by Rev 1, dated 7/18/01.
 7/27/01
 1/27/01

Survey Area	A	Survey Unit.	N/A	Building/Structure:	866
-------------	---	--------------	-----	---------------------	-----

Survey Unit/Area Description: Interior surfaces & Equipment in B866 (ASBESTOS SAMPLE LOCATIONS)



ASBESTOS SAMPLING

Building 867

No suspect ACM building materials Structure is composed of concrete pad and footer with steel I-beam skeleton, corrugated metal roofing and walls with fiberglass batt insulation Rubber expansion joints on air handling units No TSI or spray-on surfacing materials No asbestos bulk samples taken

Building 868

No suspect ACM building materials Structure is composed of concrete pad and footer with steel I-beam skeleton, corrugated metal roofing and walls with fiberglass batt insulation Rubber expansion joints on air handling units No TSI or spray-on surfacing materials Electrical transformer No asbestos bulk samples taken

Building 866

Asbestos containing transite panels form two external, protective walls (88 sf) at the entry to the building Above the double-door entry are 13 hard fittings (<6" OD), and two (2) runs of pipe (22 lf) insulated with fiberglass with a white canvas covering These pipes enter from the top of the north wall and are for steam and condensate The structure is composed of concrete pad & footers with a steel I-beam skeleton, corrugated metal roof, and steel panel siding There are three (3) fiberglass tanks with associated PVC piping and fittings A core asbestos sample was taken from a condensate fitting, and a wrap asbestos sample was taken from the steam line

Building 879

The east wall (14' high by 92 lf) of the air handling equipment room adjacent to the plenum area is covered (1,288 sf) with a spray-on acoustical fireproofing Five (5) random bulk samples were obtained for asbestos analysis Underneath the gray, spray-on is a layer of foam or Styrofoam The wall substrate is concrete twin T's In the southwest corner of the room are three (3) 55-gallon fiber drums 1 Labeled "Potassium Hydroxide Solution, 45%", 2 Labeled "Empty", and 3 No readable label

Page 1 of 1

RESERVOIRS ENVIRONMENTAL SERVICES, INC.

NVLAP Accredited Laboratory # 101894
TUE (Lead) Laboratory # 50-0156

TABLE I. PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: RES 78840-182R (Revised)
Client: Kaiser-Bell Analytical Services Division
Client Project Number / P.O.: 91D1073/REZD30128
Client Project Description: 2066 & 2079 BULK ASBESTOS, JOHNSON
Date Samples Received: July 25, 2001
Analysis Type: PLM Short Report, Bulk/Point Count
Turnaround: On-Site

Asbestos FDL

Client Sample Number	Lab ID Number	L A Y E R	Physical Description	Sub Part (%)	Asbestos FDL			Non-Fibrous Components (%)
					Visual Estimate (%)	Asbestos Fibrous Components (%)	Non-Fibrous Components (%)	
879-07122001-315-101	EMC 554986	A	Yellow foam	40	ND	0	100	
		B	Gray fibrous micaceous plaster	60	ND	30	70	
879-07122001-315-102	EMC 554987	A	Yellow foam	40	ND	0	100	
		B	Gray fibrous micaceous plaster	60	ND	20	80	
879-07122001-315-103	EMC 554988	A	Yellow foam	25	ND	0	100	
		B	Gray fibrous micaceous plaster	75	Trans-Act Point Count	20	80	
879-07122001-315-104	EMC 554989	A	Yellow foam	10	ND	0	100	
		B	Gray fibrous micaceous plaster	90	ND	20	80	
879-07122001-315-105	EMC 554990	A	Yellow foam	5	ND	0	100	
		B	Gray fibrous micaceous plaster	95	ND	20	80	
866-07122001-315-101	EMC 554991	A	White lacinous material w/white fibrous woven material	5	ND	50	50	
		B	Gray fibrous plaster	95	ND	10	90	
866-07122001-315-102	EMC 554992	A	White / silver wrap	100	ND	75	25	

ND = Not Detected
TX = Trace, < 1% Visual Estimate

Trans-Act = Transverse-Actable

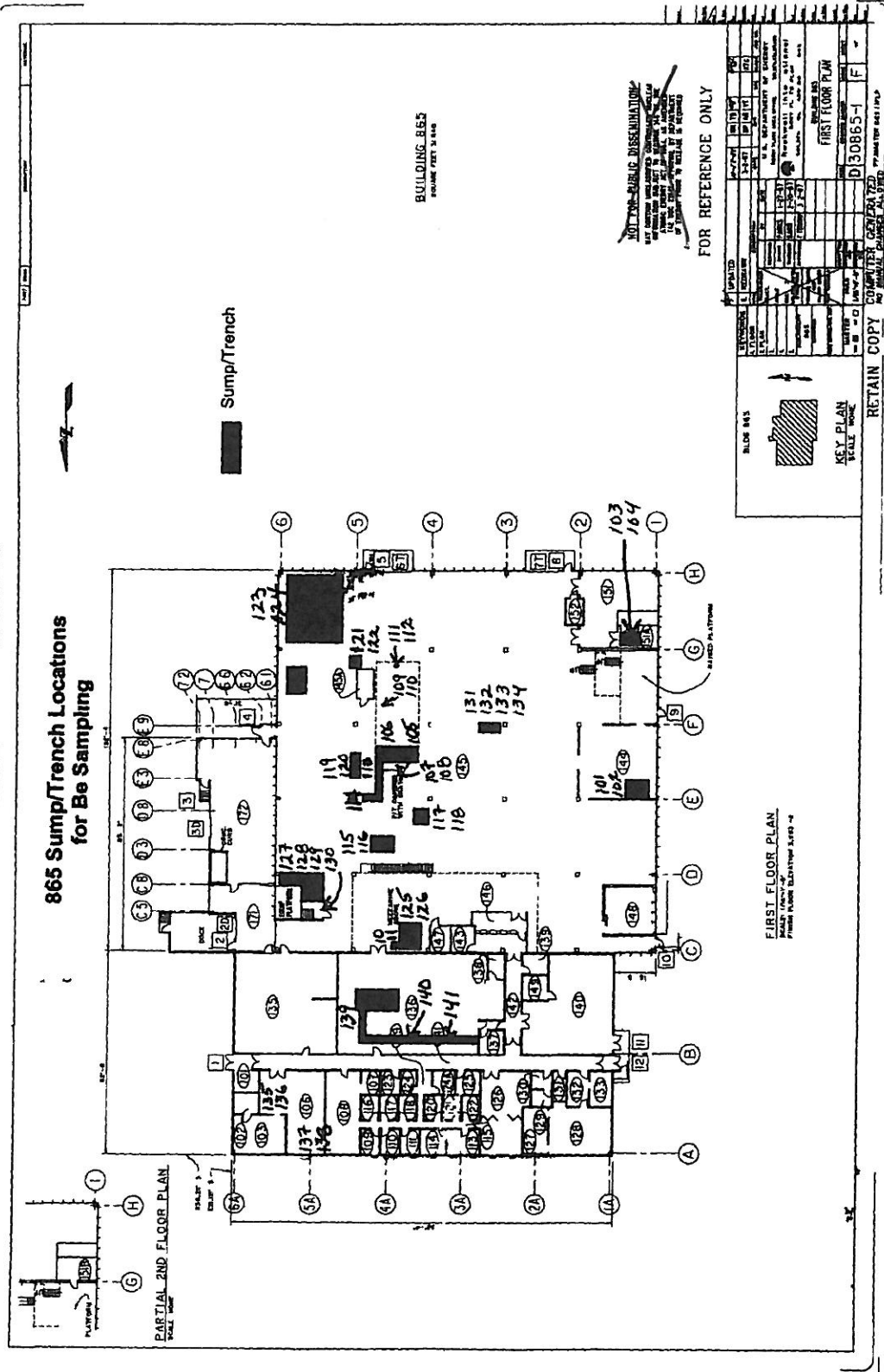
Date QA

12

Kaiser-Hill		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C.#				
RRETS		RES 78540		01D1073#001				
Sample(s)		Certificate No.		Page 1 of 1				
BIN 01D1073		JENSEN, SHELLEY/DAVID		64114717				
Project Title		Sampling Origin		Particular Order/Change Code				
R666A BERT BULK ASBESTOS		BERT & BERT		S023120				
To (Lab)		Logbook No.		Est. Order No.				
Reservoirs Environmental		Method of Shipment		Temp.				
Preserved		Related COC (if any)		Date of Lab/Alt. Mail No.				
FEB								
SPECIAL INSTRUCTIONS		HOLD TIME						
SOMEONE REQUIRED		<input type="checkbox"/>						
POSSIBLE SAMPLE HAZARD/REMARKS		SOMEONE REQUIRED						
Are acid preserved samples DOT hazardous per 40 CFR Part 173.133 Table 1? YES or NO		Are other known hazardous substances present? YES or NO						
NO		NO						
Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (Subtype/Quantity)	Sample Analysis	Preservative / Testing
01D1073-001.001	878-07122001-315-101	HI	07/12/2001	10:54 AM	B678	1-NA / N/A / 1	IH02B001 (On-Site Asbestos bulk PLM 9002) [Routine]	N/A Name
01D1073-002.001	878-07122001-315-102	HI	07/12/2001	10:59 AM	B679	1-NA / N/A / 1	IH02B001 (On-Site Asbestos bulk PLM 9002) [Routine]	N/A Name
01D1073-003.001	878-07122001-315-103	HI	07/12/2001	10:59 AM	B678	1-NA / N/A / 1	IH02B001 (On-Site Asbestos bulk PLM 9002) [Routine] IH02B006 (On-Site Asbestos bulk PLM 9002) [Routine]	N/A Name
01D1073-004.001	878-07122001-315-104	HI	07/12/2001	10:59 AM	B679	1-NA / N/A / 1	IH02B001 (On-Site Asbestos bulk PLM 9002) [Routine]	N/A Name
01D1073-005.001	878-07122001-315-105	HI	07/12/2001	11:00 AM	B678	1-NA / N/A / 1	IH02B001 (On-Site Asbestos bulk PLM 9002) [Routine]	N/A Name
01D1073-006.001	878-07122001-315-106	HI	07/12/2001	11:01 AM	B686	1-NA / N/A / 1	IH02B001 (On-Site Asbestos bulk PLM 9002) [Routine]	N/A Name
01D1073-007.001	878-07122001-315-107	HI	07/12/2001	11:01 AM	B686	1-NA / N/A / 1	IH02B001 (On-Site Asbestos bulk PLM 9002) [Routine]	N/A Name
Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time	Date/Time
Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time	Date/Time
Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time	Date/Time
Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time	Date/Time
FINAL SAMPLE		If special method (e.g., retained to customer, disposed of per lab practices, used in analytical process)		Disposed By		Date/Time		
XEROGRAPHY								

Name of Originator	Title	IHS	Bldg/Ext	T1/T2A/X	Date	P	A	MEDIA	SAMPLE TIME/	VOLUME liters	ANALYZE FOR	
Davis Babb's	JH'S				7-12-01							
SAMPLE NUMBER Bldg/Y/M/D/P#/S#												
879-7122001-315-101	" "	102										
" " " " " "	" "	163										
" " " " " "	" "	104										
" " " " " "	" "	105										
866-7122001-315-101												
866-7122001-315-102												
POINT COUNT ALL SAMPLES FROM TRACE TO ≤ 3% O												
Relinquished by	Received by	Time/Date	Relinquished by	Received by	Time/Date							
David BABB'S	G.S.Treadwell/Babb's	7-13-01	Relinquished by	Received by	Time/Date							
Relinquished by	Received by	Time/Date	Relinquished by	Received by	Time/Date							
Relinquished by	Received by	Time/Date	Relinquished by	Received by	Time/Date							
Report and Billing Instruction	Seal # (Release #)					Condition of Seal						
Kaiser-Hill Verbal To.	DAVIS BABBS					Broken Unbroken						
RMRS Fax To	X 3547											
SSOC Report To	KH											
DynCorp Bill To	KH											
WSI P.O.#/Release	EED30120											
Lab	RESERVATION											

White - Return to Originator	Yellow - Lab Copy	Green - Sample Custodian	Blue - Originator
------------------------------	-------------------	--------------------------	-------------------



DOES NOT CONTAIN
UNCLASSIFIED CONTROLLED
NUCLEAR INFORMATION

Reviewing J. A. NESHEIM
Official: *EMBC Classification Office*
Date: 10-13-08

Rocky Flats Environmental Technology Site Beryllium Wipe Sample Log

Page _____

Sample Prefix

RIN #

865 7242001 315

Bldg. - Date - IH#

Example 865-09022000-310 IWCP#

Sampler (print):

Employee #

Signature

Sample Sequence #	Room	Point on survey map	Description	Notes (ie deviations from 100cm ²)
101	144		Bottom of Sump pit, north wall, horizontal surface	
102	144		Top edge of Sump pit, horizontal surface	
103	151A		Bottom of sump pit, northeast corner, horizontal surface	
104	151A		Bottom of trench, south central, horizontal surface	
105	145		Siemens-Allis Ram, west side I-Beam, horizontal surface	
106	145		Siemens-Allis Ram, north 8' pit, bottom, horizontal surface	
107	145		Siemens-Allis Ram, north pit, extreme bottom (3' x 3') pit inside 12' pit, horizontal surface	
108	145		Siemens-Allis Ram, north pit, bottom of 12' pit, vertical surface	
109	145		Siemens-Allis Ram, bottom of central 4' pit, horizontal surface	
110	145		Siemens-Allis Ram, bottom of central 4' pit, horizontal surface	
111	145		Siemens-Allis Ram, bottom of south 3' pit, horizontal	
112	145		Siemens-Allis Ram, bottom of south 3' pit, top of pipe	
113	145		L trench, NE of SA Ram, bottom horizontal surface	
114	145		L trench, north L, bottom horizontal	
115	145		DU Roller, south pit, bottom horizontal	
116	145		DU Roller, north pit, bottom horizontal	
117	145		6-Ton Scale, pit bottom, horizontal	

Checked By (print/sign): _____

Empl.#: _____

Date: _____

Shaded area = 100cm²

Page

Shaded area = 100cm^2

Rocky Flats Environmental Technology Site Beryllium Wipe Sample Log

Sample Prefix

315

五

IWCP#

[illegible]

Shaded area = 100cm^2

18

Page

Shaded area = 100cm^2



Cover Page

Page 1 of 12

Report Identification Number 01K-0031-001
Subcontract Number KH010066
Name of Industrial Hygienist DAVID BABBS
Laboratory Identification Number DCHM
RIN 01D1321
Purchase Order/Charge Code EED50120

Sample Information

Bottle Number	Customer Sample Number	Laboratory Sample Number	Line Item Code (LIC)	Analytical Batch Identification	Sample Matrix
01D1321-001 002	865-7242001-315-101	01K00796	NR01A001	G017X01N	Filter
01D1321-002 001	865-7242001-315-102	01K00797	NR01A001	G017X01N	Filter
01D1321-003 001	865-7242001-315-103	01K00798	NR01A001	G017X01N	Filter
01D1321-004 001	865-7242001-315-104	01K00799	NR01A001	G017X01N	Filter
01D1321-005 001	865-7242001-315-105	01K00800	NR01A001	G017X01N	Filter
01D1321-006 001	865-7242001-315-106	01K00801	NR01A001	G017X01N	Filter
01D1321-007 001	865-7242001-315-107	01K00802	NR01A001	G017X01N	Filter
01D1321-008 001	865-7242001-315-108	01K00803	NR01A001	G017X01N	Filter
01D1321-009 001	865-7242001-315-109	01K00804	NR01A001	G017X01N	Filter
01D1321-010 001	865-7242001-315-110	01K00805	NR01A001	G017X01N	Filter
01D1321-011 001	865-7242001-315-111	01K00806	NR01A001	G017X01N	Filter
01D1321-012 001	865-7242001-315-112	01K00807	NR01A001	G017X01N	Filter
01D1321-013 001	865-7242001-315-113	01K00808	NR01A001	G017X01N	Filter
01D1321-014 001	865-7242001-315-114	01K00809	NR01A001	G017X01N	Filter
01D1321-015 001	865-7242001-315-115	01K00810	NR01A001	G017X01N	Filter
01D1321-016 001	865-7242001-315-116	01K00811	NR01A001	G017X01N	Filter
01D1321-017 001	865-7242001-315-117	01K00812	NR01A001	G017X01N	Filter
01D1321-018 001	865-7242001-315-118	01K00813	NR01A001	G017X01N	Filter
01D1321-019 001	865-7242001-315-119	01K00814	NR01A001	G017X01N	Filter
01D1321-020 001	865-7242001-315-120	01K00815	NR01A001	G017X01N	Filter
01D1321-021 001	865-7242001-315-121	01K00816	NR01A001	G017X01N	Filter
01D1321-022 001	865-7242001-315-122	01K00817	NR01A001	G017X01N	Filter
01D1321-023 001	865-7242001-315-123	01K00818	NR01A001	G017X01N	Filter
01D1321-024 001	865-7242001-315-124	01K00819	NR01A001	G017X01N	Filter
01D1321-025 001	865-7242001-315-125	01K00820	NR01A001	G017X01N	Filter
01D1321-026 001	865-7242001-315-126	01K00821	NR01A001	G017X01N	Filter
01D1321-027 001	865-7242001-315-127	01K00822	NR01A001	G017X01N	Filter
01D1321-028 001	865-7242001-315-128	01K00823	NR01A001	G017X01N	Filter
01D1321-029 001	865-7242001-315-129	01K00824	NR01A001	G017X01N	Filter

DataChem Laboratories, Inc
960 West Levoe Drive
Salt Lake City, Utah 84123-2547

Phone (801) 266-7700
FAX (801) 268-9992

Web Page www.datachem.com
E-mail lab@datachem.com



Cover Page

Page 2 of 12

Bottle Number	Customer Sample Number	Laboratory Sample Number	Line Item Code (LIC)	Analytical Batch Identification	Sample Matrix
01D1321-030 001	865-7242001-315-130	01K00825	NR01A001	G017X01N	Filter
01D1321-031 001	865-7252001-315-131	01K00826	NR01A001	G017X01N	Filter
01D1321-032 001	865-7252001-315-132	01K00827	NR01A001	G017X01N	Filter
01D1321-033 001	865-7252001-315-133	01K00828	NR01A001	G017X01N	Filter
01D1321-034 001	865-7252001-315-134	01K00829	NR01A001	G017X01N	Filter
01D1321-035 001	865-7252001-315-135	01K00830	NR01A001	G017X01N	Filter
01D1321-036 001	865-7252001-315-136	01K00831	NR01A001	G017X01N	Filter
01D1321-037 001	865-7252001-315-137	01K00832	NR01A001	G017X01N	Filter
01D1321-038 001	865-7252001-315-138	01K00833	NR01A001	G017X01N	Filter
01D1321-039 001	865-7252001-315-139	01K00834	NR01A001	G017X01N	Filter
01D1321-040 001	865-7252001-315-140	01K00835	NR01A001	G017X01N	Filter
01D1321-041 001	865-7252001-315-141	01K00836	NR01A001	G017X01N	Filter
01D1321-042 001	865-7262001-01-10	01K00837	NR01A001	G017X01N	Filter
01D1321-043 001	865-7262001-01-11	01K00838	NR01A001	G017X01N	Filter

I certify that this electronic image, and all hardcopies produced from this image, accurately represents the data and is in compliance with the RFETS specific requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package narrative. Release, by submission through email, the data contained in this electronic image and the computer-readable EDD (as applicable), has been authorized by the laboratory Manager or the Manager's designee.

The Delivery and receipt of this Data Deliverable constitutes an invoice for payment for this Data Deliverable.

Name Jason Kim
Title Chemist
Date August 30, 2001



Case Narrative Page

Page 3 of 12

Report Identification Number 01K-0031-001
Subcontract Number KH010066
Name of Industrial Hygienist DAVID BABBS
Laboratory Identification Number DCHM
RIN 01D1321
Purchase Order/Charge Code EED50120

General Set Information: There are forty-three field samples in this batch of RIN # 01D1321. The samples were analyzed for beryllium in wipe. No problems were encountered with receipt of these samples and no contact with the CTR was required.

Method Summary: Samples were transferred to digestion vessels, and spiked with a 10 mL aliquot of 1 N Nitric Acid. Samples were digested in microwave with pre-set program. After completion of digestion, samples were diluted to 25mL volume with ASTM Type II Water. Samples were shaken well and settled at least for 2 hours before the analysis. Samples were analyzed in a Flame Atomic Absorption Spectrometer. A clean representative portion of the digestate is aspirated and atomized in a flame. A light beam from a hollow cathode lamp is directed through the flame into a monochromator, and onto a detector that measures the amount of absorbed light. Measurement is integrated with instrument software and recorded.

Sample Preparation: All samples were prepared in accordance with DCL SOP, IH-AN-001 and modified NIOSH method NMAM 7300 for microwave digestion.

Holding Times: The holding times were met for both sample preparation and analysis.

Limit of Detection and Required Detection Limit: Limit of Detection (LOD) is 0.047 µg/sample for this modified NIOSH method NMAM 7300 which is determined from Method Detection Limit (MDL) study, and Required Detection Limit (RDL) is 0.10 µg/sample for this contract of the analysis.

Instrument Calibration: Instrument calibration was performed in accordance with published procedures of NIOSH method NMAM 7300.

Initial and Continuing Calibration Verification Analysis: Recoveries for the analyte in all Initial Calibration Verification (ICV) and Continuing Calibration Verification (CCV) samples are within the quality control limits of $\pm 10\%$.

Initial and Continuing Calibration Blank Analysis: No analyte was found in any Initial Calibration Blank (ICB) or Continuing Calibration Blank (CCB) at levels above the absolute value of the RDL.

Media Blank Analysis: No analyte was found in any Media Blank sample at levels above the LOD.

Dilution(s): None were required.



Case Narrative Page

Page 4 of 12

Laboratory Control Sample and Duplicate Analysis: Three Laboratory Control Samples (LCS) and three Laboratory Control Sample Duplicates (LCSD) were prepared and analyzed. Results for the analyte in the LCS's are within the control limits of $\pm 20\%$. The Relative Percent Differences (RPD) between LCS and LCSD are within the control limits of 0% to 20%.

Replicate Analysis: Replicate analysis was made from three field samples. One RPD between the sample and the replicate is within the control limits of 0% to 20%. The other two replicate analyses are negligible for because the results of the samples and its replicates are below the RDL.

Flagging Codes:

U - Analyte is not detected above the LOD of 0.047 $\mu\text{g}/\text{sample}$

B - Analyte result is between the LOD of 0.047 $\mu\text{g}/\text{sample}$ and the RDL of 0.10 $\mu\text{g}/\text{sample}$

Nonconformance/Corrective Action Report (NC/CAR): None were required

Sample Calculation: The final results are calculated by the following equations

Final result for aqueous samples ($\mu\text{g}/\text{sample}$) = (A) x (B) x (C)

Where

A = Analyte concentration from instrument determination ($\mu\text{g}/\text{mL}$)

B = Concentration factor from sample preparation

= $\frac{\text{Final Volume of Digestate (mL)}}{\text{Sample}}$

C = Dilution performed at time of analysis

Example Calculation: $(1 \mu\text{g}/\text{L}) \times (0.025 \text{ L}/\text{sample}) \times (1) = 0.025 \mu\text{g}/\text{sample}$

Miscellaneous Comments: Sample 01K00801 and 01K00802 are filtered through Whatman Filter 41 Graded (Lot A552399) due to high content of oil residue prior to the analysis.



Report Page

Page 5 of 12

Report Identification Number 01K-0031-001
Subcontract Number KH010066
Name of Industrial Hygienist DAVID BABBS
Laboratory Identification Number DCHM
RIN 01D1321
Purchase Order/Charge Code EED50120

Customer Sample Number	Laboratory Sample Number	Beryllium $\mu\text{g/wipe}$	
865-7242001-315-101	01K00796	3 7	
865-7242001-315-102	01K00797	6 0	
865-7242001-315-103	01K00798	15	
865-7242001-315-104	01K00799	0 33	
865-7242001-315-105	01K00800	0 82	
865-7242001-315-106	01K00801	1 8	
865-7242001-315-107	01K00802	0 12	
865-7242001-315-108	01K00803	0 42	
865-7242001-315-109	01K00804	0 10	U
865-7242001-315-110	01K00805	0 10	U
865-7242001-315-111	01K00806	0 10	U
865-7242001-315-112	01K00807	0 077	B
865-7242001-315-113	01K00808	6 0	
865-7242001-315-114	01K00809	1 8	
865-7242001-315-115	01K00810	0 15	
865-7242001-315-116	01K00811	0 74	
865-7242001-315-117	01K00812	0 31	
865-7242001-315-118	01K00813	0 97	
865-7242001-315-119	01K00814	0 70	
865-7242001-315-120	01K00815	0 63	
865-7242001-315-121	01K00816	0 071	B
865-7242001-315-122	01K00817	0 30	
865-7242001-315-123	01K00818	0 12	
865-7242001-315-124	01K00819	0 21	
865-7242001-315-125	01K00820	17	
865-7242001-315-126	01K00821	20	
865-7242001-315-127	01K00822	0 080	B
865-7242001-315-128	01K00823	0 13	
865-7242001-315-129	01K00824	0 43	
865-7242001-315-130	01K00825	2 5	

24
DataChem Laboratories, Inc
960 West Levoy Drive
Salt Lake City Utah 84123-2547

Phone (801) 266-7700
FAX (801) 268-9992

Web Page www.datachem.com
E-mail lab@datachem.com

Customer Sample Number	Laboratory Sample Number	Beryllium µg/wipe	
865-7252001-315-131	01K00826	0 33	
865-7252001-315-132	01K00827	2 8	
865-7252001-315-133	01K00828	0 19	
865-7252001-315-134	01K00829	0 25	
865-7252001-315-135	01K00830	1 6	
865-7252001-315-136	01K00831	3 1	
865-7252001-315-137	01K00832	0 26	
865-7252001-315-138	01K00833	1 8	
865-7252001-315-139	01K00834	0 10	U
865-7252001-315-140	01K00835	0 10	U
865-7252001-315-141	01K00836	0 10	U
865-7262001-01-10	01K00837	1 9	
865-7262001-01-11	01K00838	1 5	
Limit of Detection (LOD)		0 047	
Required Detection Limit (RDL)		0 10	

U - Parameter not detected above LOD

B - Parameter between LOD and RDL



QC Summary Page

Page 7 of 12

Report Identification Number 01K-0031-001
Subcontract Number KH010066
Name of Industrial Hygienist DAVID BABBS
Laboratory Identification Number DCHM
RIN 01D1321
Purchase Order/Charge Code EED50120

Batch ID G017X01N

QC Sample ID	Sample Description	Analyte	Units	Result	Target	Percent Recovery	Relative Percent Difference
BL-187742-1	Method Blank	Beryllium	µg/wipe	ND	NA	NA	NA
QC-187742-1	LCS	Beryllium	µg/wipe	25 0	25 0	100	NA
QD-187742-1	LCSD	Beryllium	µg/wipe	24 4	25 0	97 6	2 5
BL-187742-2	Method Blank	Beryllium	µg/wipe	ND	NA	NA	NA
QC-187742-2	LCS	Beryllium	µg/wipe	25 1	25 0	101	NA
QD-187742-2	LCSD	Beryllium	µg/wipe	25 2	25 0	101	0 068
BL-187742-3	Method Blank	Beryllium	µg/wipe	ND	NA	NA	NA
QC-187742-3	LCS	Beryllium	µg/wipe	24 6	25 0	98 5	NA
QD-187742-3	LCSD	Beryllium	µg/wipe	24 6	25 0	98 3	0 17

LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
NA - Not Applicable
ND - Parameter not detected above LOD

Percent Recovery = (Result / Target) * 100 0

Relative Percent Difference = ((|LCS - LCSD|) / ((LCS + LCSD)/2 0)) * 100

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST										C.O.C. # 01D1321#002	
REFETS										Page 1 of 5	
Sample(s) BABBS, DAVID		(unitless)		Contact/Requester JOHNSON, SHELLEY		Telephone No. 6401					
BIN 01D1321		Sampling Origin 865		FEDERAL EXPRESS		Purchase Order/Charge Code EED50120		Temp.			
Project Title BBS BE SWEARS		Logbook No. N/A		Intended of Shipment FEDERAL EXPRESS		Bill of Lading/Air Bill No. 4533 2127					
To (Lab) DataChem Laboratories, Inc		Related COC (if any)		PRE		010101-0072601 REV1					
Protocol										SPECIAL INSTRUCTIONS	
POSSIBLE SAMPLE HAZARDS/REMARKS Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table II? YES or NO Are other known hazardous substances present? YES or NO										SCREENERING REQUIRED <input type="checkbox"/>	
*** **											
Bottle No	Customer Number	Matrix	Date	Time	Location	Container (use type/quantity)	Sample Analysis	Preservative	Packing		
01D1321-001	865-7242001-315-101	FILTER			B865	1 FILTER / N/A	NR01A001 (Beryllium Filter Analysis) [3ds]	N/A	None		
01D1321-002	865-7242001-315-102	FILTER	07/24/2001	7:00 AM	B865	1-FILTER / N/A	NR01A001 (Beryllium Filter Analysis) [3ds]	N/A	None	97	
01D1321-003	865-7242001-315-103	FILTER	07/24/2001	7:00 AM	B865	1-FILTER / N/A	NR01A001 (Beryllium Filter Analysis) [3ds]	N/A	None	98	
01D1321-004	865-7242001-315-104	FILTER	07/24/2001	7:00 AM	B865	1-FILTER / N/A	NR01A001 (Beryllium Filter Analysis) [3ds]	N/A	None	99	
01D1321-005	865-7242001-315-105	FILTER	07/24/2001	7:00 AM	B865	1-FILTER / N/A	NR01A001 (Beryllium Filter Analysis) [3ds]	N/A	None	800	
01D1321-006	865-7242001-315-106	FILTER	07/24/2001	7:00 AM	B865	1-FILTER / N/A	NR01A001 (Beryllium Filter Analysis) [3ds]	N/A	None	01	
01D1321-007	865-7242001-315-107	FILTER	07/24/2001	7:00 AM	B865	1-FILTER / N/A	NR01A001 (Beryllium Filter Analysis) [3ds]	N/A	None	02	
Relinquished By [Signature]		Date/Time 08-27-01 11:50		Received By [Signature]		Date/Time 08-27-01 11:50		Relinquished By [Signature]		Date/Time 08-27-01 11:50	
Relinquished By		Date/Time		Received By		Date/Time		Relinquished By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time		Relinquished By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time		Relinquished By		Date/Time	
FINAL SAMPLE DISPOSITION										Disposal Method (e.g. returned to customer, disposed of per lab procedure, used in analytical process)	

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST										COC # 01D1321#002	
										Page 2 of 5	
Contact/Requestor JOHNSEN SHELLY										Telephone No 6401	
IRIN	01D1321	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative Packaging		
01D1321-008 001	865-7242001-315-108	FILTER	07/24/2001	7:00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	01K00803	N/A		
01D1321-009 001	865-7242001-315-109	FILTER	07/24/2001	7:00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	04	N/A		
01D1321-010 001	865-7242001-315-110	FILTER	07/24/2001	7:00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	05	N/A		
01D1321-011 001	865-7242001-315-111	FILTER	07/24/2001	7:00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	06	N/A		
01D1321-012 001	865-7242001-315-112	FILTER	07/24/2001	7:00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	07	N/A		
01D1321-013 001	865-7242001-315-113	FILTER	07/24/2001	7:00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	08	N/A		
01D1321-014 001	865-7242001-315-114	FILTER	07/24/2001	7:00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	09	N/A		
01D1321-015 001	865-7242001-315-115	FILTER	07/24/2001	7:00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	10	N/A		
01D1321-016 001	865-7242001-315-116	FILTER	07/24/2001	7:00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	11	N/A		
01D1321-017 001	865-7242001-315-117	FILTER	07/24/2001	7:00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	12	N/A		
01D1321-018 001	865-7242001-315-118	FILTER	07/24/2001	7:00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	13	N/A		
Relinquished By	08-27-01	1500	Received By	08-27-01	1500	Relinquished By	Received By	08/28/01 10:00			
Relinquished By			Received By			Relinquished By	Received By				
Relinquished By			Received By			Relinquished By	Received By				
Relinquished By			Received By			Relinquished By	Received By				
FINAL SAMPLE DISPOSITION										Disposed By	
Disposal Method (e.g. returned to customer, disposed of per lab procedure, used in analytical process)										Date/Time	

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST										COC # 01D1321#002	
										Page 3 of 5	
Contact/Requestor JOHNSEN SHELLY										Telephone No 6401	
IRN	Boite No	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative Packaging		
01D1321-019 001	865-7242001-315-119		FILTER	07/24/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	OK 00814	
01D1321-020 001	865-7242001-315-120		FILTER	07/24/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	15	
01D1321-021 001	865-7242001-315-121		FILTER	07/24/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	16	
01D1321-022 001	865-7242001-315-122		FILTER	07/24/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	17	
01D1321-023 001	865-7242001-315-123		FILTER	07/24/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	18	
01D1321-024 001	865-7242001-315-124		FILTER	07/24/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	19	
01D1321-025 001	865-7242001-315-125		FILTER	07/24/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	20	
01D1321-026 001	865-7242001-315-126		FILTER	07/24/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	21	
01D1321-027 001	865-7242001-315-127		FILTER	07/24/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	22	
01D1321-028 001	865-7242001-315-128		FILTER	07/24/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	23	
01D1321-029 001	865-7242001-315-129		FILTER	07/24/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	24	
Relinquished By	J. H. Kelly - 08-27-01/1500			Received By		F. J. Ex		Date/Time	Relinquished By	Date/Time	Received By
Relinquished By				Received By		F. J. Ex		Date/Time	Relinquished By	Date/Time	Received By
Relinquished By				Received By		F. J. Ex		Date/Time	Relinquished By	Date/Time	Received By
Relinquished By				Received By		F. J. Ex		Date/Time	Relinquished By	Date/Time	Received By
FINAL SAMPLE DISPOSITION											
Disposal Method (e.g. returned to customer, disposed of per lab procedure, used in analytical process)											
Deposited By											

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST										COC # 01D1321#002	
										Page 4 of 5	
Contact/Requestor JOHNSEN SHELLY										Telephone No 6401	
Bottle No	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative Packing			
01D1321-030 001	865-7242001 315-130	FILTER	07/24/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A			
01D1321-031 001	865-7252001 315-131	FILTER	07/25/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	26		
01D1321-032 001	865-7252001 315-132	FILTER	07/25/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	27		
01D1321-033 001	865-7252001 315-133	FILTER	07/25/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	28		
01D1321-034 001	865-7252001 315-134	FILTER	07/25/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	29		
01D1321-035 001	865-7252001 315-135	FILTER	07/25/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	30		
01D1321-036 001	865-7252001 315-136	FILTER	07/25/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	31		
01D1321-037 001	865-7252001 315-137	FILTER	07/25/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	32		
01D1321-038 001	865-7252001 315-138	FILTER	07/25/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	33		
01D1321-039 001	865-7252001 315-139	FILTER	07/25/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	34		
01D1321-040 001	865-7252001 315-140	FILTER	07/25/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A	35		
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time				
Relinquished By	8/27/01 1500	Received By	8/27/01 1500	Relinquished By		Received By	8/28/01 1000				
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time				
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time				
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time				
FINAL SAMPLE DISPOSITION										Disposal Method (e.g. returned to customer, disposed of per lab procedure used in analytical process)	
										Disposed By	
										Date/Time	

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST										COC # 01D1321#002	
										Page 5 of 5	
Contact/Requester: JOHNSON SHELLEY										Telephone No 6401	
Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative Packing			
01D1321-041 001	865-7252001 315-141	FILTER	07/25/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A			
01D1321-042 001	865-07262001-01-10	FILTER	07/26/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	None			
01D1321-043 001	865-07262001 01 11	FILTER	07/26/2001	7 00 AM	B865	1-FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [3dS]	N/A			
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/2/10</div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8/</div></div>											

☐ Property ☐ Waste ☒ Sample

RELEASE EVALUATION FORM

Page 1 of ____

Release Evaluation No 010724-00116-001 EXTENDED NO EXPIRES. N/A Charge No.. N/A**PART I****SENDER/CUSTODIAN ACKNOWLEDGEMENT**

Description of Property/Waste/Sample To Be Released/Transferred: Beryllium smears from B865 Sample numbers are included as an attachment to this release evaluation

Current Location: B865

Destination: DataChem Laboratories, Inc , 960 West LeVoy Drive, Salt Lake City, Utah, 84123

New Recipient/Custodian: Same as above

History/Process Knowledge: Beryllium smears were taken from sump, pit, trench, and duct areas in B865 These areas have known contamination and are posted as a CA/HCA The isotope of concern is depleted uranium

Has the specified material ever been in an RBA/CA or contacted DOE controlled radioactive materials? Yes

- 1) By signing below, I certify information provided in Part I of this release evaluation to be true and accurate
- 2) By signing below, I agree to comply with the specific requirements noted in Part II of this release evaluation

Sender/Custodian David Ba [REDACTED] Date 7/25/01 Ext 4717

PART II**RADIOLOGICAL ENGINEERING****SPECIFIC REQUIREMENTS AND/OR COMMENTS**

The isotope of concern is depleted uranium

Sender/Custodian Provide package that only contains beryllium smears to CASI for gamma spectroscopy analysis Provide Radiological Engineering (Arlan Moore) with a copy of the gamma spectroscopy analysis for TBD-00139 interpretation. Retain and make available the chain of custody and survey records for all samples shipped under the conditions of this release evaluation The sender shall provide the shipper a copy of this release evaluation with appropriate documentation along with the samples being shipped to the receiving analytical laboratory

RCT Perform contamination surveys in accordance with RSP 7 02 of the external of each shipping package Acceptance criteria shall not exceed 20 dpm/100cm² (alpha) or 1000 dpm/100cm² (beta) Perform necessary actions for onsite shipment to CASI for gamma spectroscopy analysis (i.e., completed RAM transfer tag)

CASI Ensure all requirements of this release evaluation have been satisfied prior to shipment Retain all release evaluation documentation for auditing purposes

For IATA purposes, gamma spectroscopy acceptance criteria shall be as follows

Depleted Uranium 509 pCi/g (specific activity) or total activity of the package not to exceed 472 nCi

DATACHEM LABORATORIES, INC , OPERATES UNDER THE UTAH DEPARTMENT OF ENVIRONMENT QUALITY DIVISION OF RADIATION CONTROL RADIOACTIVE MATERIAL LICENSE UT 1800237 AMENDMENT 10 THAT EXPIRES ON MAY 31, 2002

These samples are being shipped as non-radioactive in accordance with IATA Dangerous Goods Regulations

PROPERTY/WASTE RELEASE EVALUATION SIGNATURE REQUIREMENTSRelease Evaluation #: 010724-00116-001Page 2 of

Evaluated J  Date 7/24/01 Ext 3050
 Radiological Engineer

APPROVAL FOR TRANSFER/SHIPMENT

The samples specified in Part 1 of this release evaluation are being provided with authorization for transport as non-radioactive materials in accordance with Department of Transportation (49 CFR) regulation This authorization for shipment does not constitute an unrestricted release

Approved _____ Emp No _____ Date _____ Ext _____
 Radiological Engineer

Release Evaluation for Waste:

A Release Evaluation for Waste requires an evaluation and unrestricted release approval signature The evaluation signature is by the Radiological Engineer (RE) providing the methods or criteria for unrestricted release (i.e., survey requirements, analytical requirements, no survey required, etc.) The unrestricted release approval signature for a Release Evaluation for Waste shall be a RE authorized to provide unrestricted release approval In addition, the evaluation and unrestricted release approval signatures shall not be the same RE The intent of this provision is to provide peer review of the evaluation and method of unrestricted release It is important the RE take the peer review process seriously and not become a "rubber stamp" for their fellow engineer

Release Evaluation for Property:

A Release Evaluation for Property requires an evaluation and unrestricted release approval signature For a Release Evaluation for Property, the evaluation and unrestricted release signature may be the same RE In the past, only one signature was required for property for which a RE could provide an unrestricted release on the basis of process knowledge/history

Release Evaluation for Samples:

Samples are any waste or material that is being shipped to an off-site facility for analysis Samples that may be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques may be authorized for shipment to an off-site facility using the signatory requirements specified for property Samples which cannot be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques shall be authorized for shipment from the Site using the methodology specified for waste, i.e., second signature being provided by a RE authorized to perform peer review and approval for shipment

PROPERTY/WASTE RELEASE EVALUATION SIGNATURE REQUIREMENTS**Release Evaluation #:** 010724-00116-001**Page 3 of**

The approval for transfer/shipment section of a Sample Release Evaluation (SRE) shall be revised as noted below for samples which cannot be provide with an unrestricted release

"The samples specified in Part 1 of this release evaluation are being provided with authorization for transport as non-radioactive materials in accordance with Department of Transportation (49 CFR) regulation This authorization for shipment does not constitute an unrestricted release "

Additional Documentation:

Number of lines per section may be modified or additional pages attached to ensure adequate documentation of information necessary to perform release evaluation

Additional pages or attachments to a release evaluation shall have the evaluation number, Page of , initials of Radiological Engineer signing approval for transfer/shipment and date

Britten, Jay

This release evaluation (REN # 010724-00116-001) applies to the following Beryllium sample numbers

865-7242001-315-101 thru 865-7242001-315-130

865-7252001-315-131 thru 865-7252001-315-141

865-07262001-01-10 thru 865-07262001-01-11

Any additional samples will require further evaluation for radiological characterization

Jay M. Britten

RISS Radiological Engineering

Omega Consultants, Inc

(303) 966-3050 (office)

(303) 212-5254 (pager)

e-mail jay.britten@rfets.gov

INSTRUMENT DATA					
Mfg. Ludlum	Mfg. NE Electra	Mfg. NE Electra	Survey Type: contamination		
Model 2929	Model DP-6	Model DP-6	Building: 865		
Serial # 147742	Serial # 3107	Serial # 3107	Location: Trenches and sumps and pits		
Cal Due 7/31/01	Cal Due 9/28/01	Cal Due 9/28/01	Purpose: BE Swipe Release Survey		
Bkg 0.3 cpm	Bkg 1 cpm	Bkg 1 cpm	RWP # 886-01-21		
Efficiency 33.70 %	Efficiency 22.00 %	Efficiency 22.00 %	Date 7/26/01 Time 800		
MDA 14 dpm	MDA 33 dpm	MDA 33 dpm	RCT: [REDACTED]		
Mfg. Ludlum	Mfg. NE Electra	Mfg. NE Electra	RCT: [REDACTED]		
Model 2929	Model DP-6	Model DP-6			
Serial # 147742	Serial # 3107	Serial # 3107			
Cal Due 7/31/01	Cal Due 9/28/01	Cal Due 9/28/01			
Bkg 78 cpm	Bkg 622 cpm	Bkg 622 cpm			
Efficiency 37.50 %	Efficiency 32.50 %	Efficiency 32.50 %			
MDA 92 dpm	MDA 365 dpm	MDA 365 dpm			
PRN/REN #: 010724-00116-001					
Comments:					

SURVEY RESULTS

Swipe #	Location / Description	Removable		Total		Swipe #	Location / Description	Removable		Total	
		Alpha	Beta	Alpha	Beta			Alpha	Beta	Alpha	Beta
1	Results in DPM/100sq.cm	58	805	NA	NA	26	865-7242001-315-126	<14	<92	N/A	N/A
2	865-7242001-315-102	115	979	NA	NA	27	865-7242001-315-127	<14	<92	N/A	N/A
3	865-7242001-315-103	<14	211	NA	NA	28	865-7242001-315-128	<14	80	N/A	N/A
4	865-7242001-315-104	<14	<92	NA	NA	29	865-7242001-315-129	<14	3	N/A	N/A
5	865-7242001-315-105	121	624	NA	NA	30	865-7242001-315-130	<14	88	N/A	N/A
6	865-7242001-315-106	17	640	NA	NA	31	865-7252001-315-131	<14	<92	N/A	N/A
7	865-7242001-315-107	14	189	NA	NA	32	865-7252001-315-132	17	179	N/A	N/A
8	865-7242001-315-108	<14	109	NA	NA	33	865-7252001-315-133	<14	29	N/A	N/A
9	865-7242001-315-109	<14	16	NA	NA	34	865-7252001-315-134	<14	53	N/A	N/A
10	865-7242001-315-110	20	91	NA	NA	35	865-7252001-315-135	20	99	N/A	N/A
11	865-7242001-315-111	11	80	NA	NA	36	865-7252001-315-136	17	163	N/A	N/A
12	865-7242001-315-112	1361	4528	NA	NA	37	865-7252001-315-137	<14	80	N/A	N/A
13	865-7242001-315-113	11	245	NA	NA	38	865-7252001-315-138	17	77	N/A	N/A
14	865-7242001-315-114	14	101	NA	NA	39	865-7252001-315-139	<14	<92	N/A	N/A
15	865-7242001-315-115	29	413	NA	NA	40	865-7252001-315-140	<14	53	N/A	N/A
16	865-7242001-315-116	11	123	NA	NA	41	865-7252001-315-141	<14	<92	N/A	N/A
17	865-7242001-315-117	8	<92	NA	NA	42	865-07262001-01-10	26	35	N/A	N/A
18	865-7242001-315-118	17	40	NA	NA	43	865-07262001-01-11	11	93	N/A	N/A
19	865-7242001-315-119	17	80	NA	NA	44	O/S of bag	<14	<92	N/A	N/A
20	865-7242001-315-120	23	80	NA	NA		N/A	N/A	N/A	N/A	N/A
21	865-7242001-315-121	<14	<92	NA	NA		N/A	N/A	N/A	N/A	N/A
22	865-7242001-315-122	11	77	NA	NA		N/A	N/A	N/A	N/A	N/A
23	865-7242001-315-123	91	160	NA	NA		N/A	N/A	N/A	N/A	N/A
24	865-7242001-315-124	61	419	NA	NA		N/A	N/A	N/A	N/A	N/A
25	865-7242001-315-125	14	67	NA	NA		N/A	N/A	N/A	N/A	N/A

Date Reviewed: 8-16-01 RS Supervisor: [REDACTED]

Rocky Flats Environmental Technology Site
10808 Hwy 93 Golden, CO 80403-8200

RIN # 0101321

PRE # 010724-00116-001

Safety and Industrial Hygiene Chain of Custody Record and Analysis Request

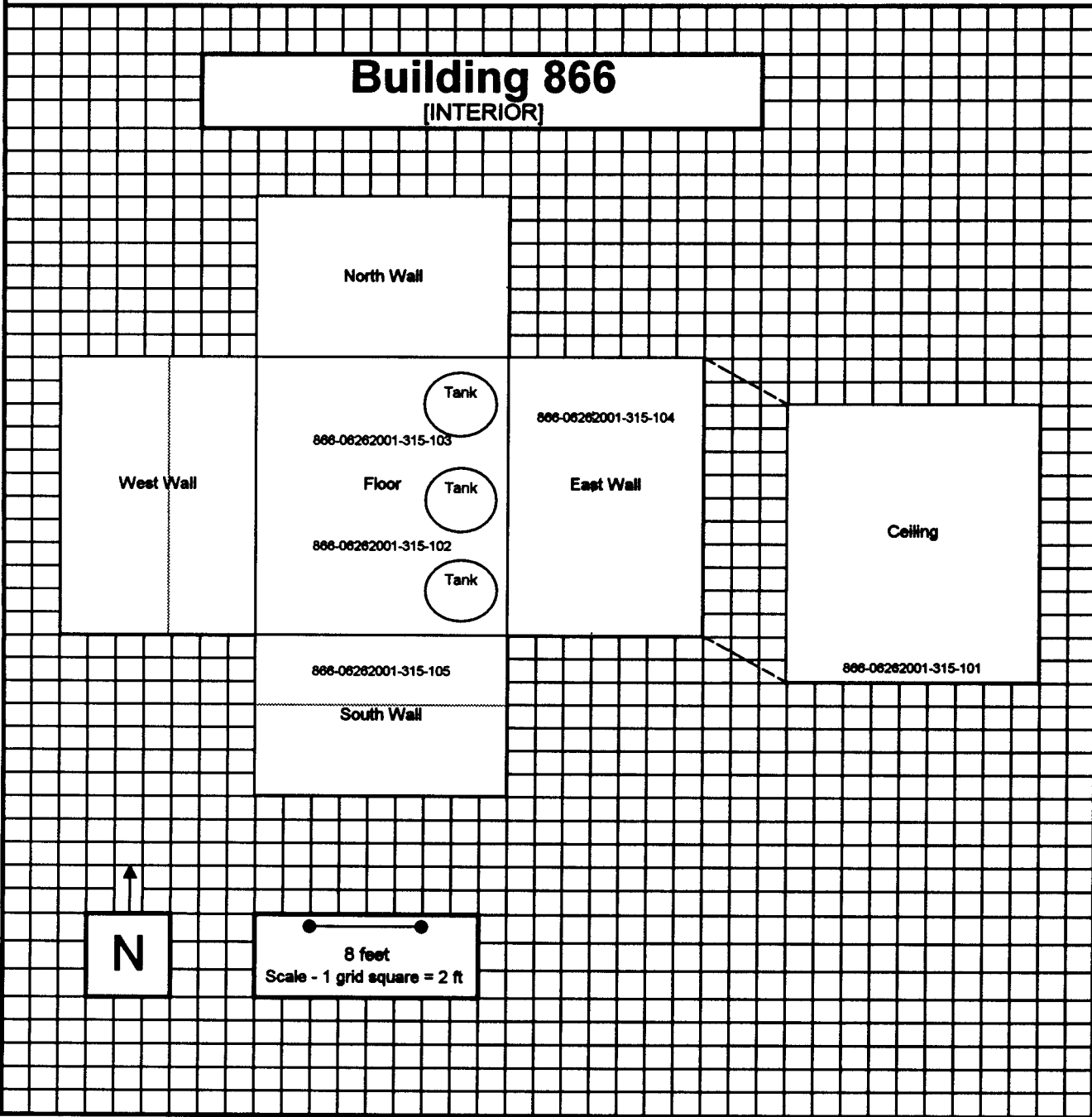
Name of Originator DAVIS BARBS Title: IHS				Bldg/Ext: 7117A/4717		Date 8-15-01		Page 1 of 2	
Sample Number Bldg/Y/M/D/P#S#	ANALYZE FOR	Volume Liters	Sample Time	MEDIA	PERSONAL AREA BULK SW/PE	REMARKS	LAB NUMBER		
865-7242001-315-101	Be	—	NA	NA	NR01A001				
865-7242001-315-102									
865-7242001-315-103									
865-7242001-315-104									
865-7242001-315-105									
865-7242001-315-106									
865-7242001-315-107									
865-7242001-315-108									
865-7242001-315-109									
865-7242001-315-110									
865-7242001-315-111									
865-7242001-315-112									
865-7242001-315-113									
865-7242001-315-114									
865-7242001-315-115									
865-7242001-315-116									
865-7242001-315-117									
865-7242001-315-118									
865-7242001-315-119									
865-7242001-315-120									
865-7242001-315-121									
865-7242001-315-122									
865-7242001-315-123									
865-7242001-315-124									
865-7242001-315-125									
865-7242001-315-126									
883 Lockbox	Received by DAVIS BARBS		Time / Date 13:15 / 8/20/01	Relinquished by DAVIS BARBS		Received by 883 Lockbox	Time / Date 14:24 / 8-20-01		
883 Lockbox	Received by DAVIS BARBS		Time / Date 14:45 / 8-21-01	Relinquished by DAVIS BARBS		Received by DAVIS BARBS	Time / Date 1506 / 8-21-01		
Report and Billing Instruction Verbal To DAVIS BARBS, KH Fax To X-3547 Report To DAVIS BARBS, KH PO# EED 50120				Analysis Request <input type="checkbox"/> Standard Service <input checked="" type="checkbox"/> Rush <input type="checkbox"/> Other Industrial Hygiene Sample <input type="checkbox"/> Asbestos Samples <input type="checkbox"/> 24 Rush <input type="checkbox"/> 2 Rush				Condition of Seal <input type="checkbox"/> Broken <input type="checkbox"/> Unbroken Signature Comments	

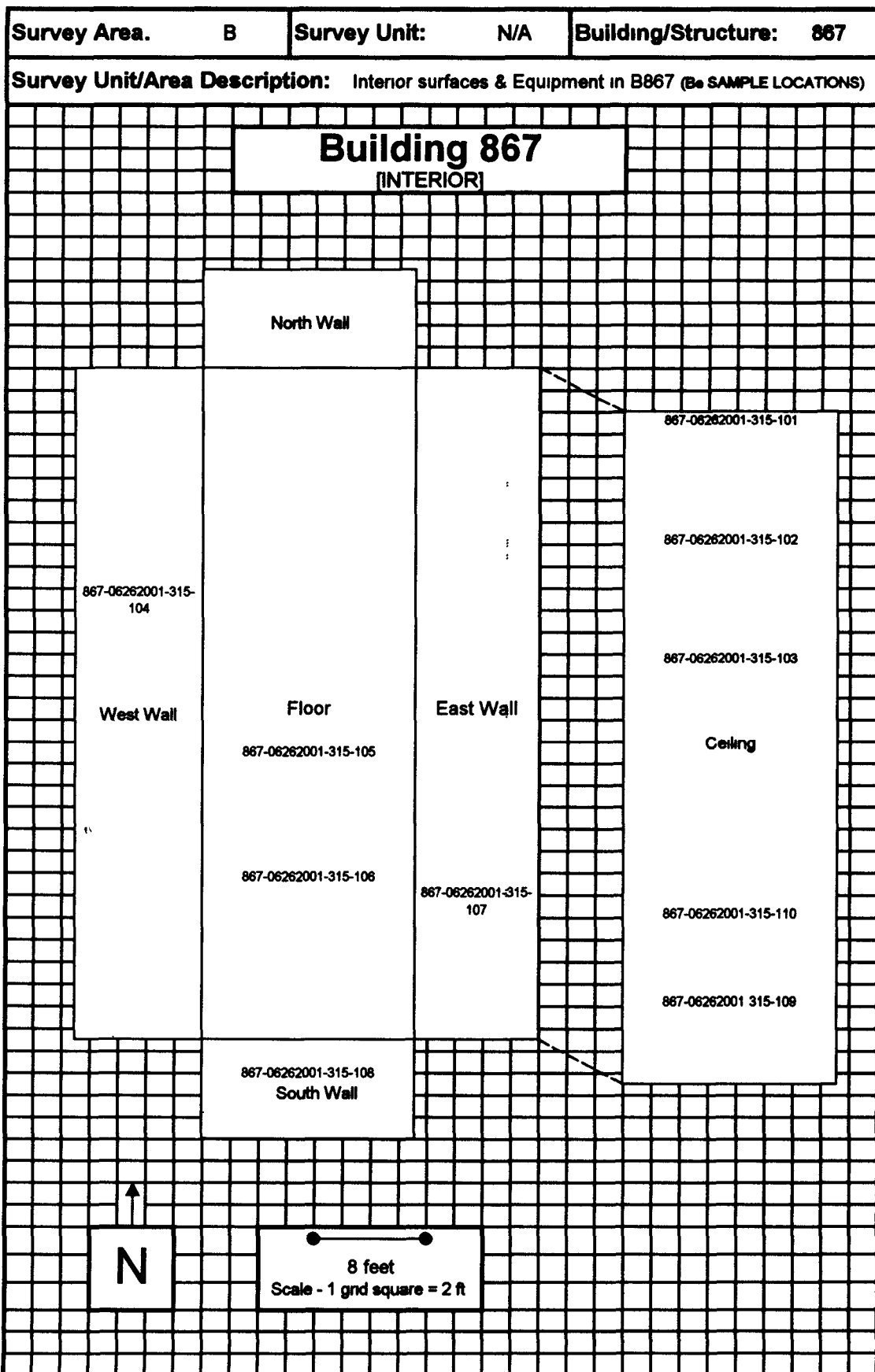
Name of Originator: DAVID BARRIS			Title: IH & S			Bldg/Ext: T117A/4717			Date: 8-15-01			Page 2 of 2		
Sample Number Bldg/YM/D/P#S#	ANALYZE FOR	Volume Liters	Sample Time	MEDIA	PERSONAL AREA BULK	REMARKS	LAB NUMBER							
865-7242001-315-127	BE	NA	NA	NA	NA	NA								
865-7242001-315-128														
865-7242001-315-129														
865-7242001-315-130														
865-7252001-315-131														
865-7252001-315-132														
865-7252001-315-133														
865-7252001-315-134														
865-7252001-315-135														
865-7252001-315-136														
865-7252001-315-137														
865-7252001-315-138														
865-7252001-315-139														
865-7252001-315-140														
865-7252001-315-141														
865-07262001-01-10														
865-07262001-01-11														
Are acid preserved samples DOT Hazardous per 40 CFR Part 136 3 Table II? YES or NO DB														
Are other known hazardous substances present? YES or NO DB														
Relinquished by	Received by	Time / Date	Relinquished by	Received by	Time / Date									
883 <i>lockbox</i>	<i>DAVID BARRIS</i>	13.15/8-20-01	<i>DAVID BARRIS</i>	<i>883 lockbox</i>	14.24/8-20-01									
Relinquished by	Received by	Time / Date	Relinquished by	Received by	Time / Date									
883 <i>lockbox</i>	<i>DAVID BARRIS</i>	14.45/8-21-01	<i>DAVID BARRIS</i>	<i>883 lockbox</i>	15.06/8-21-01									
Report and Billing Instruction			Analysis Request			Seal # (Release #)								
Verbal To: <i>DAVID BARRIS, KH, X. 4717</i>			Industrial Hygiene Sample			Condition of Seal								
Fax To: <i>X 3547</i>			Rush <input checked="" type="checkbox"/> Other <input type="checkbox"/>			<input type="checkbox"/> Broken <input type="checkbox"/> Unbroken								
Report To: <i>DAVID BARRIS, KH, T117A</i>			Asbestos Samples			Signature: <i>Unable to verify</i>								
PO# <i>EED50120</i>			Standard Service <input type="checkbox"/> 24 Rush <input type="checkbox"/>			Comments: <i>at RIN 01N/321</i>								

White - Return to Originator Yellow - Lab Copy Pink - Sample Custodian Gold - Originator

Survey Area	A	Survey Unit:	N/A	Building/Structure:	866
-------------	---	--------------	-----	---------------------	-----

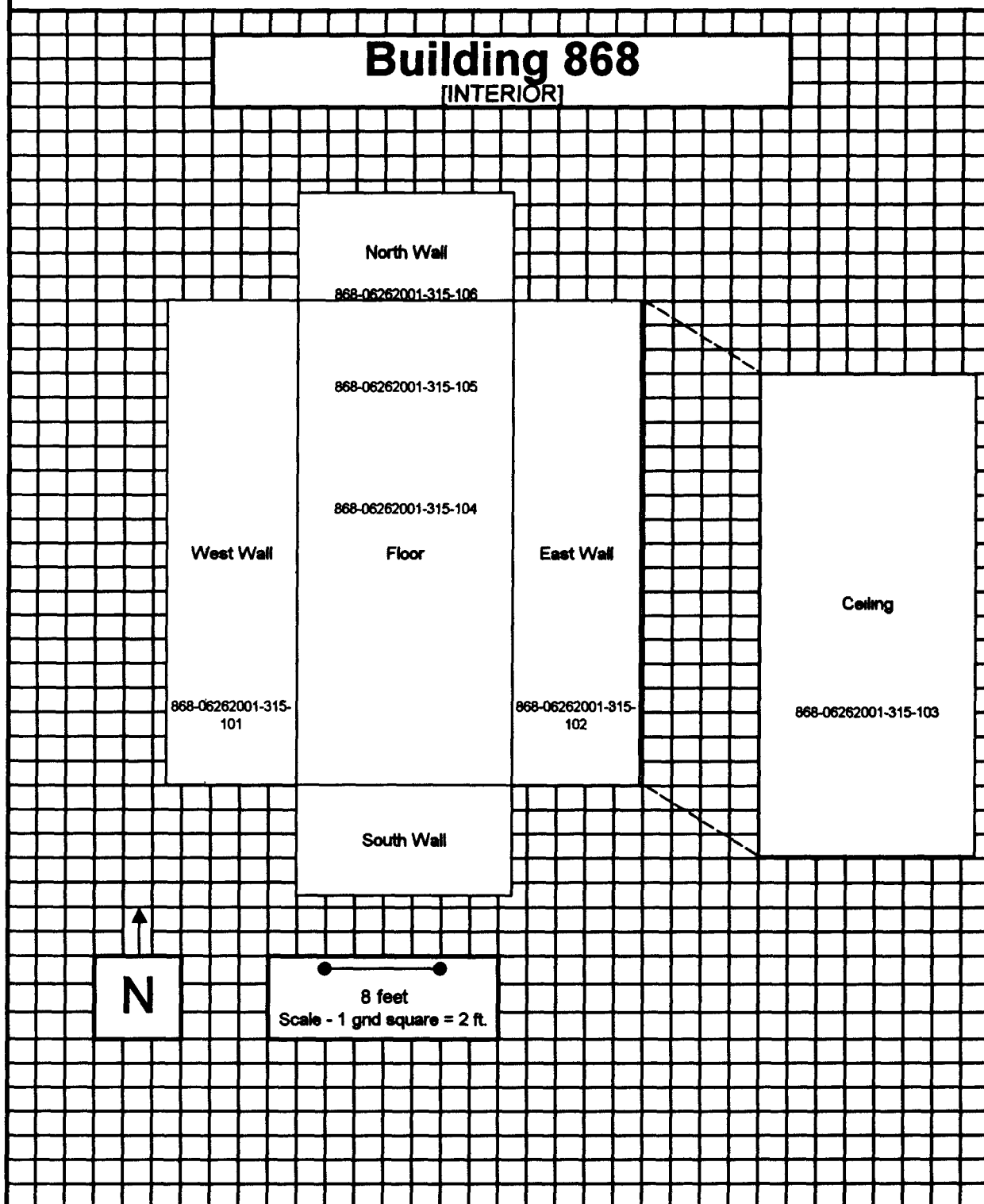
Survey Unit/Area Description. Interior surfaces & Equipment in B866 (Be SAMPLE LOCATIONS)





Survey Area.	C	Survey Unit.	N/A	Building/Structure:	868
--------------	---	--------------	-----	---------------------	-----

Survey Unit/Area Description: Interior surfaces & Equipment in B868 (Be SAMPLE LOCATIONS)





Cover Page

Page 1 of 1

Report Identification Number 01K-0007
Subcontract Number KH010066
Name of Industrial Hygienist D Babbs
Laboratory Identification Number DCHM
RIN 01D1003
Purchase Order/Charge Code EED50120

Sample Information

Bottle Number	Customer Sample Number	Laboratory Sample Number	Line Item Code (LIC)	Analytical Batch Identification	Sample Matrix
01D1003-001 001	866-06262001-315-101	01K00224	NR01A001	G0165018	FILTER
01D1003-002 001	866-06262001-315-102	01K00225	NR01A001	G0165018	FILTER
01D1003-003 001	866-06262001-315-103	01K00226	NR01A001	G0165018	FILTER
01D1003-004 001	866-06262001-315-104	01K00227	NR01A001	G0165018	FILTER
01D1003-005 001	866-06262001-315-105	01K00228	NR01A001	G0165018	FILTER
01D1003-006 001	867-06262001-315-101	01K00229	NR01A001	G0165018	FILTER
01D1003-007 001	867-06262001-315-102	01K00230	NR01A001	G0165018	FILTER
01D1003-008 001	867-06262001-315-103	01K00231	NR01A001	G0165018	FILTER
01D1003-009 001	867-06262001-315-104	01K00232	NR01A001	G0165018	FILTER
01D1003-010 001	867-06262001-315-105	01K00233	NR01A001	G0165018	FILTER
01D1003-011 001	867-06262001-315-106	01K00234	NR01A001	G0165018	FILTER
01D1003-012 001	867-06262001-315-107	01K00235	NR01A001	G0165018	FILTER
01D1003-013 001	867-06262001-315-108	01K00236	NR01A001	G0165018	FILTER
01D1003-014 001	867-06262001-315-109	01K00237	NR01A001	G0165018	FILTER
01D1003-015 001	867-06262001-315-110	01K00238	NR01A001	G0165018	FILTER
01D1003-016 001	868-06262001-315-101	01K00239	NR01A001	G0165018	FILTER
01D1003-017 001	868-06262001-315-102	01K00240	NR01A001	G0165018	FILTER
01D1003-018 001	868-06262001-315-103	01K00241	NR01A001	G0165018	FILTER
01D1003-019 001	868-06262001-315-104	01K00242	NR01A001	G0165018	FILTER
01D1003-020 001	868-06262001-315-105	01K00243	NR01A001	G0165018	FILTER
01D1003-021 001	868-06262001-315-106	01K00244	NR01A001	G0165018	FILTER

I certify that this electronic image, and all hardcopies produced from this image, accurately represents the data and is in compliance with the RFETS specific requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package narrative Release, by submission through email, the data contained in this electronic image and the computer-readable EDD (as applicable), has been authorized by the laboratory Manager or the Manager's designee



Cover Page

Page 2 of 2

The Delivery and receipt of this Data Deliverable constitutes an invoice for payment for this Data Deliverable

Name Jason Kim
Title Chemist
Date 07/10/01

44
DataChem Laboratories, Inc
960 West Levoe Drive
Salt Lake City Utah 84123-2547

Phone (801) 266-7700
FAX (801) 268-9992

Web Page www.datachem.com
E-mail lab@datachem.com



Case Narrative Page

Page 3 of 3

Report Identification Number 01K-0007
Subcontract Number KH010066
Name of Industrial Hygienist D Babbs
Laboratory Identification Number DCHM
RIN 01D1003
Purchase Order/Charge Code EED50120

General Set Information: There are twenty-one field samples in this batch of RIN # 01D1003. The samples were analyzed for beryllium in wipe. No problems were encountered with receipt of these samples and no contact with the CTR was required.

Method Summary: Samples were transferred to digestion vessels, and spiked with a 10 mL aliquot of 1:1 Nitric Acid. Samples were digested in microwave with pre-set program. After completion of digestion, samples were diluted to 25mL volume with ASTM Type II Water. Samples were shaken well and settled at least for 2 hours before the analysis. Samples were analyzed in a Flame Atomic Absorption Spectrometer. A clean representative portion of the digestate is aspirated and atomized in a flame. A light beam from a hollow cathode lamp is directed through the flame into a monochromator, and onto a detector that measures the amount of absorbed light. Measurement is integrated with instrument software and recorded.

Sample Preparation: All samples were prepared in accordance with DCL SOP, IH-AN-001 and modified NIOSH method NMAM 7300 for microwave digestion.

Holding Times: The holding times were met for both sample preparation and analysis.

Limit of Detection and Required Detection Limit: Limit of Detection (LOD) is 0.047 µg/sample for this modified NIOSH method NMAM 7300 which is determined from Method Detection Limit (MDL) study, and Required Detection Limit (RDL) is 0.10 µg/sample for this contract of the analysis.

Instrument Calibration: Instrument calibration was performed in accordance with published procedures of NIOSH method NMAM 7300.

Initial and Continuing Calibration Verification Analysis: Recoveries for the analyte in all Initial Calibration Verification (ICV) and Continuing Calibration Verification (CCV) samples are within the quality control limits of $\pm 10\%$.

Initial and Continuing Calibration Blank Analysis: No analyte was found in any Initial Calibration Blank (ICB) or Continuing Calibration Blank (CCB) at levels above the absolute value of the RDL.

Media Blank Analysis: Results of Media Blanks are between the LOD of 0.047 µg/sample and the RDL of 0.10 µg/sample.

Dilution(s): None were required

Laboratory Control Sample and Duplicate Analysis: Laboratory Control Samples (LCS) and Laboratory Control Sample Duplicates (LCSD) were prepared and analyzed. Results for the analyte in the LCS's are within the control limits of $\pm 20\%$. The Relative Percent Differences (RPD) between LCS and LCSD are within the control limits of 0% to 20%.

Replicate Analysis: Replicate analysis was made from two field samples. One replicate's RPD between the sample and the replicate are within the control limits of 0% to 20%. The other replicate analysis is negligible because the results of the samples and its replicates are below the RDL.

Flagging Codes: U - Analyte is not detected above the LOD of 0.047 $\mu\text{g}/\text{sample}$. B - Analyte result is between the LOD of 0.047 $\mu\text{g}/\text{sample}$ and the RDL of 0.10 $\mu\text{g}/\text{sample}$.

Nonconformance/Corrective Action Report (NC/CAR): None were required.

Sample Calculation: The final results are calculated by the following equations:

$$\text{Final result for aqueous samples } (\mu\text{g}/\text{sample}) = (A) \times (B) \times (C)$$

Where

A = Analyte concentration from instrument determination ($\mu\text{g}/\text{mL}$)

B = Concentration factor from sample preparation

$$= \frac{\text{Final Volume of Digestate (mL)}}{\text{Sample}}$$

C = Dilution performed at time of analysis

$$\text{Example Calculation: } (1 \mu\text{g}/\text{L}) \times (0.025 \text{ L}/\text{sample}) \times (1) = 0.025 \mu\text{g}/\text{sample}$$

Report Identification Number 01K-0007
 Subcontract Number KH010066
 Name of Industrial Hygienist D Babbs
 Laboratory Identification Number DCHM
 RIN 01D1003
 Purchase Order/Charge Code EED50120

Customer Sample Number	Laboratory Sample Number	Beryllium $\mu\text{g}/\text{Wipe}$	
866-06262001-315-101	01K00224	0 18	
866-06262001-315-102	01K00225	0 11	
866-06262001-315-103	01K00226	0 25	
866-06262001-315-104	01K00227	0 11	
866-06262001-315-105	01K00228	0 079	B
867-06262001-315-101	01K00229	0 056	B
867-06262001-315-102	01K00230	0 074	B
867-06262001-315-103	01K00231	0 10	U
867-06262001-315-104	01K00232	0 10	U
867-06262001-315-105	01K00233	0 082	B
867-06262001-315-106	01K00234	0 061	B
867-06262001-315-107	01K00235	0 10	U
867-06262001-315-108	01K00236	0 10	U
867-06262001-315-109	01K00237	0 10	U
867-06262001-315-110	01K00238	0 10	U
868-06262001-315-101	01K00239	0 10	U
868-06262001-315-102	01K00240	0 10	U
868-06262001-315-103	01K00241	0 10	U
868-06262001-315-104	01K00242	0 050	B
868-06262001-315-105	01K00243	0 10	U
868-06262001-315-106	01K00244	0 10	U
Limit of Detection (LOD)		0 047	
Required Detection Limit (RDL)		0 10	

U - Parameter not detected above LOD

B - Parameter between LOD and RDL



QC Summary Page

Page 6 of 6

Report Identification Number 01K-0007
Subcontract Number KH010066
Name of Industrial Hygienist D Babbs
Laboratory Identification Number DCHM
RIN 01D1003
Purchase Order/Charge Code EED50120

Batch ID

QC Sample ID	Sample Description	Analyte	Units	Result	Target	Percent Recovery	Relative Percent Difference
BL-185955-1	Media Blank	Beryllium	µg/Wipe	0.051	NA	NA	NA
QC-185955-1	LCS	Beryllium	µg/Wipe	23.7	25	94.9	NA
QD-185955-1	LCSD	Beryllium	µg/Wipe	23.6	25	94.3	0.59
BL-185955-2	Media Blank	Beryllium	µg/Wipe	0.072	NA	NA	NA
QC-185955-2	LCS	Beryllium	µg/Wipe	24.2	25	96.7	NA
QD-185955-2	LCSD	Beryllium	µg/Wipe	24.5	25	97.9	1.2

LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
NA - Not Applicable
ND - Parameter not detected above LOD

Percent Recovery = (Result / Target) * 100.0

Relative Percent Difference = $\left(\frac{|LCS - LCSD|}{((LCS + LCSD)/2.0)} \right) * 100.0$

Commodore Advanced Sciences, Inc		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				COC # 01D1003#001		
RFETS						Page 1 of 3		
Sample(s) D. BABBS	Contact/Requester JOHNSEN, SHELLEY	Telephone No. 6401						
RIN 01D1003	Sampling Origin 866/867/868	Purchase Order/Charge Code EED50120						
Project Title B865 BE SWEARS	Logbook No. N/A	Temp						
To (Lab) DataChem Laboratories, Inc	Method of Shipment FEDERAL EXPRESS	Bill of Lading/Air Bill No 4553 2127 5812						
Protocol	Related COC (if any)	PRE						
SPECIAL INSTRUCTIONS		010605 T130C-004						
SCREENING REQUIRED <input type="checkbox"/>								
<p>POSSIBLE SAMPLE HAZARDS/REMARKS</p> <p>Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table 11? YES or <u>NO</u></p> <p>Are other known hazardous substances present? YES or <u>NO</u></p> <p>*** **</p>								
Bottle No	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative Packing
01D1003-001 001	866-06262001 315-101	FILTER	06/26/2001	7:00 AM	866	1-FILTER / N/A	NR01A001 (Beryllium Filter Analysis) [5dS]	N/A
01D1003-002 001	866-06262001 315-102	FILTER	06/26/2001	7:00 AM	866	1-FILTER / N/A	NR01A001 (Beryllium Filter Analysis) [5dS]	N/A
01D1003-003 001	866-06262001 315-103	FILTER	06/26/2001	7:00 AM	866	1-FILTER / N/A	NR01A001 (Beryllium Filter Analysis) [5dS]	N/A
01D1003-004 001	866-06262001 315-104	FILTER	06/26/2001	7:00 AM	866	1-FILTER / N/A	NR01A001 (Beryllium Filter Analysis) [5dS]	N/A
01D1003-005 001	866-06262001 315-105	FILTER	06/26/2001	7:00 AM	866	1-FILTER / N/A	NR01A001 (Beryllium Filter Analysis) [5dS]	N/A
01D1003-006 001	867-06262001 315-101	FILTER	06/26/2001	7:00 AM	867	1-FILTER / N/A	NR01A001 (Beryllium Filter Analysis) [5dS]	N/A
01D1003-007 001	867-06262001 315-102	FILTER	06/26/2001	7:00 AM	867	1-FILTER / N/A	NR01A001 (Beryllium Filter Analysis) [5dS]	N/A
Relinquished By Muney	Date/Time 7/5/01 1500	Received By Fed Ex	Date/Time 7/6/01 1000					
Relinquished By	Date/Time	Received By	Date/Time					
Relinquished By	Date/Time	Received By	Date/Time					
Relinquished By	Date/Time	Received By	Date/Time					
FINAL SAMPLE DISPOSITION		Disposal Method (e.g. returned to customer, disposed of per lab procedure, used in analytical process)						

Commodore Advanced Sciences, Inc				CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				CUC # 01D1003#001	
IN				Telephone No 6401				Page 2 of 3	
Customer Number		Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative Packing	
01D1003-008 001	867-06262001 315-103	FILTER	06/26/2001	7:00 AM	867	1 FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [5dS]	N/A	31
01D1003-009 001	867-06262001 315-104	FILTER	06/26/2001	7:00 AM	867	1 FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [5dS]	N/A	32
01D1003-010 001	867-06262001 315-105	FILTER	06/26/2001	7:00 AM	867	1 FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [5dS]	N/A	33
01D1003-011 001	867-06262001 315-106	FILTER	06/26/2001	7:00 AM	867	1 FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [5dS]	N/A	34
01D1003-012 001	867-06262001 315-107	FILTER	06/26/2001	7:00 AM	867	1 FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [5dS]	N/A	35
01D1003-013 001	867-06262001 315-108	FILTER	06/26/2001	7:00 AM	867	1 FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [5dS]	N/A	36
01D1003-014 001	867-06262001 315-109	FILTER	06/26/2001	7:00 AM	867	1 FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [5dS]	N/A	37
01D1003-015 001	867-06262001 315-110	FILTER	06/26/2001	7:00 AM	867	1 FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [5dS]	N/A	38
01D1003-016 001	868-06262001 315-101	FILTER	06/26/2001	7:00 AM	868	1 FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [5dS]	N/A	39
01D1003-017 001	868-06262001 315-102	FILTER	06/26/2001	7:00 AM	868	1 FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [5dS]	N/A	40
01D1003-018 001	868-06262001 315-103	FILTER	06/26/2001	7:00 AM	868	1 FILTER / N/A / 1	NR01A001 (Beryllium Filter Analysis) [5dS]	N/A	41
Relinquished By	7/5/01 1200	Received By	7/5/01 1200	Received By	7/5/01 1200	Relinquished By	7/5/01 1200	Received By	7/5/01 1200
Relinquished By		Received By		Received By		Relinquished By		Received By	
Relinquished By		Received By		Received By		Relinquished By		Received By	
Relinquished By		Received By		Received By		Relinquished By		Received By	
FINAL SAMPLE DISPOSITION				Disposal Method (e.g. returned to customer, disposed of per lab procedure, used in analytical process)					

[illegible]

Property Waste Sample XX

RELEASE EVALUATION FORMPage 1 of 3

Release Evaluation No 010605 T130C-004EXTENDED YES EXPIRES DECEMBER 31, 2001 Charge No _____

**PART I
ACKNOWLEDGMENT****SENDER/CUSTODIAN**

Description of Property/Waste/Sample To Be Released/Transferred LAPEL AIR SAMPLES AND SWIPES

Current Location 444, 883 and 865 BUILDING COMPLEXES

Destination, DataChem Laboratories INC 960 West LeVoy Drive, Salt Lake City UTAH 84123

New Recipient/Custodian , DataChem Laboratories INC 960 West LeVoy Drive, Salt Lake City UTAH 84123

History/Process Knowledge THE AIR SAMPLES ARE TAKEN IN DUPLICATE, ONE OF WHICH WILL BE SURVEYED PER RSP 7 02 AND REPRESENT THE ACTIVITY OF THE ACTUAL SAMPLE THAT WILL BE SENT INDUSTRIAL HYGIENE WILL ENSURE THAT THE AIRFLOW OF THE DUPLICATE FILTER IS EQUAL TO OR GREATER THAN THE ACTUAL FILTER THAT IS TO BE SENT TO A OFF-SITE FACILITY THE SWIPES ACTIVITY WILL BE READ PER RSP 7 02

Has the specified material ever been in an RMMA/RBA/CA or contacted DOE controlled radioactive materials? UNKNOWN

- 1) By signing below, I certify information provided in Part I of this release evaluation to be true and accurate
2) By signing below, I agree to comply with the specific requirements noted in Part II of this release evaluation

Sender/ [REDACTED] Date, 06/05/01 Ext 6727

RSFORMS-9.01-01

PART II

RADIOLOGICAL ENGINEERING

SPECIFIC REQUIREMENTS AND/OR COMMENTS

FACT (22 dpm/pci X 509 pci/gram x 0.15 grams/filter)= 167.97 dpm/filter to meet DEPLETED URANIUM IATA SHIPPING LIMITS

- 1 The Radiological Control Technician shall surface contamination survey of the duplicate air sample cassette and the duplicate air filter per RSP 7.02. All surveys shall be recorded for both loose surface contamination for both alpha and beta emitters -
- 2 ACCEPTANCE CRITERIA FOR THE EXTERNAL PORTIONS OF THE LAPEL AIR SAMPLER SHALL NOT EXCEED 20 DPM/100cm² (alpha) OR 1000 DPM/100cm² (beta)
- 3 ACCEPTANCE CRITERIA FOR SWIPES TO BE SHIPPED SHALL NOT EXCEED 167.97 DPM/100cm²
- 4 ACCEPTANCE CRITERIA FOR THE DUPLICATE AIR FILTER SHALL NOT EXCEED 167.97 DPM PER FILTER
- 5 THE RCT SHALL PERFORM CONTAMINATION SURVEYS PER RSP 7.02 on the external of each shipping package. ACCEPTANCE CRITERIA SHALL NOT EXCEED 20 DPM/100cm² (ALPHA) OR 1000 dpm/100cm² (beta)
- 6 Beta surveys are not required if the facility has on record a Technical Basis Document exempting the need for Beta monitoring

6 The sender/custodian will provide all data to radiological engineering if any filter/swipe is above criteria listed in section above. Radiological Engineering may SUM the complete shipment, if the shipment **TOTAL ACTIVITY** is below 472 NANOCURIES, BASED UPON **DEPLETED URANIUM** CONTAMINATE then the radiological engineer will sign the surveys annotating that material may be shipped

- 7 The sender/custodian shall retain and make available to Radiological Engineering, the chain of custody and survey records for all sample shipped under the terms and conditions of the release evaluation. The sender custodian shall provide the shipper a copy of the survey and this Release Evaluation along with the samples being sent to the analytical laboratory. This release will meet the DOT (49 CFR) requirements of less than 2 nanocuries per gram
- 8 DATACHEM LABORATORIES, INC. OPERATED UNDER UTAH DEPARTMENT OF ENVIRONMENT QUALITY DIVISION OF RADIATION CONTROL RADIOACTIVE MATERIAL LICENSE UT 1800237 AMMENDMENT 10 THAT EXPIRES ON MAY 31, 2002

9 CASI will ensure that all requirements of this release evaluation have been satisfied prior to shipping

10 CASI will retain all P/WRE DATA PACKAGES FOR AUDITING PURPOSES

11 THIS MATERIAL IS BEING SHIPPED AS NON-RADIOACTIVE IN ACCORDANCE WITH IATA DANGEROUS GOODS REGULATIONS

Evaluation

Date

6/12/01 Ext 6385

The samples specified in Part 1 of this release evaluation are being provided with authorization for transport as non-radioactive materials in accordance with Department of Transportation (49 CFR) regulations. This authorization for shipment does not constitute an unrestricted release.

APPROVAL FOR TRANSFER/SHIPMENT

Approved

Date

6/14/01 Ext 3050

SAMPLE RELEASE 010605-T130C-004

PROPERTY/WASTE RELEASE EVALUATION SIGNATURE REQUIREMENTS

Release Evaluation # 010605-T130C-004

Page 3 of __3__

Release Evaluation for Waste

A Release Evaluation for Waste requires an evaluation and unrestricted release approval signature. The evaluation signature is by the Radiological Engineer (RE) providing the methods or criteria for unrestricted release (i.e., survey requirements, analytical requirements, no survey required, etc.). The unrestricted release approval signature for a Release Evaluation for Waste shall be a RE authorized to provide unrestricted release approval. In addition, the evaluation and unrestricted release approval signatures shall not be the same RE. The intent of this provision is to provide peer review of the evaluation and method of unrestricted release. It is important the RE take the peer review process seriously and not become a "rubber stamp" for their fellow engineer.

Release Evaluation for Property:

A Release Evaluation for Property requires an evaluation and unrestricted release approval signature. For a Release Evaluation for Property, the evaluation and unrestricted release signature may be the same RE. In the past, only one signature was required for property for which a RE could provide an unrestricted release on the basis of process knowledge/history.

Release Evaluation for Samples:

Samples are any waste or material that is being shipped to an off-site facility for analysis. Samples that may be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques may be authorized for shipment to an off-site facility using the signatory requirements specified for property. Samples which cannot be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques shall be authorized for shipment from the Site using the methodology specified for waste, i.e., second signature being provided by a RE authorized to perform peer review and approval for shipment.

The approval for transfer/shipment section of a Sample Release Evaluation (SRE) shall be revised as noted below for samples which cannot be provided with an unrestricted release.

"The samples specified in Part 1 of this release evaluation are being provided with authorization for transport as non-radioactive materials in accordance with Department of Transportation (49 CFR) regulation. This authorization for shipment does not constitute an unrestricted release."

Additional Documentation.

Number of lines per section may be modified or additional pages attached to ensure adequate documentation of information necessary to perform release evaluation.

Additional pages or attachments to a release evaluation shall have the evaluation number, Page __ of __, initials of Radiological Engineer signing approval for transfer/shipment and date

--

COPY

RS FORMS 07.02-01

INSTRUMENT DATA

Mfg	EBERLINE	Mfg	N/A	Mfg	N/A
Model	SAC-4	Model	N/A	Model	N/A
Serial #	961	Serial #	N/A	Serial #	N/A
Cal Due	11/1/01	Cal Due	N/A	Cal Due	N/A
Bkg	0.5 cpm α	Bkg	N/A cpm α	Bkg	N/A cpm α
Efficiency	33.00 %	Efficiency	N/A %	Efficiency	N/A %
MDA	20 dpm α	MDA	N/A dpm α	MDA	N/A dpm α

Survey Type: ALPHA/BETA CONTAMINATION

Building 866, 867 & 868

Location MAIN RM. IN EACH BUILDING

Purpose RELEASE Be SMEARS TO LAB

RWP # N/A

Date 7/2/01 Time 9 00

RC

Mfg	EBERLINE	Mfg	N/A	Mfg	N/A
Model	BC-4	Model	N/A	Model	N/A
Serial #	868	Serial #	N/A	Serial #	N/A
Cal Due	7/12/01	Cal Due	N/A	Cal Due	N/A
Bkg	42.6 cpm β	Bkg	N/A cpm β	Bkg	N/A cpm β
Efficiency	25.00 %	Efficiency	N/A %	Efficiency	N/A %
MDA	200 dpm β	MDA	N/A dpm α	MDA	N/A dpm β

RCT N/A / N/A / N/A

Print name

Signature

Emp #

PRN/REN #: 010605-T130C-004

Comments: ISOTOPE OF CONCERN IS PU-239 AND DU SURVEY ON OUTSIDE OF BAG SHOWED NO ELEVATED ACTIVITY ABOVE MDA

SURVEY RESULTS

ALPHA

BETA

Swipe #	LOCATION	ALPHA			BETA		
		Swipe	Direct	Wipe	Swipe	Direct	Wipe
		dpm/100cm ²	dpm/100cm ²	dpm/wipe	dpm/100cm ²	dpm/100cm ²	dpm/wipe
1	866-06262001-315-101	<20	N/A	N/A	<200	N/A	N/A
2	866-06262001-315-102	<20	N/A	N/A	<200	N/A	N/A
3	866-06262001-315-103	<20	N/A	N/A	<200	N/A	N/A
4	866-06262001-315-104	<20	N/A	N/A	<200	N/A	N/A
5	866-06262001-315-105	<20	N/A	N/A	<200	N/A	N/A
6	867-06262001-315-101	<20	N/A	N/A	<200	N/A	N/A
7	867-06262001-315-102	<20	N/A	N/A	<200	N/A	N/A
8	867-06262001-315-103	<20	N/A	N/A	<200	N/A	N/A
9	867-06262001-315-104	<20	N/A	N/A	<200	N/A	N/A
10	867-06262001-315-105	<20	N/A	N/A	<200	N/A	N/A
11	867-06262001-315-106	<20	N/A	N/A	<200	N/A	N/A
12	867-06262001-315-107	<20	N/A	N/A	<200	N/A	N/A
13	867-06262001-315-108	<20	N/A	N/A	<200	N/A	N/A
14	867-06262001-315-109	<20	N/A	N/A	<200	N/A	N/A
15	867-06262001-315-110	<20	N/A	N/A	<200	N/A	N/A
16	868-06262001-315-101	<20	N/A	N/A	<200	N/A	N/A
17	868-06262001-315-102	<20	N/A	N/A	<200	N/A	N/A
18	868-06262001-315-103	<20	N/A	N/A	<200	N/A	N/A
19	868-06262001-315-104	<20	N/A	N/A	<200	N/A	N/A
20	868-06262001-315-105	<20	N/A	N/A	<200	N/A	N/A

Date Reviewed 7/3/01

RS Supervision

Print Name

Signature

Emp #

COPY

SURVEY RESULTS

Swipe #	LOCATION	ALPHA			BETA		
		Swipe	Direct	Wipe	Swipe	Direct	Wipe
		dpm/100cm2	dpm/100cm2	dpm/wipe	dpm/100cm2	dpm/100cm2	dpm/wipe
21	868-06262001-315-106	<20	N/A	N/A	<200	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A	N/A	N/A
23	N/A	N/A	N/A	N/A	N/A	N/A	N/A
24	N/A	N/A	N/A	N/A	N/A	N/A	N/A
25	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26	N/A	N/A	N/A	N/A	N/A	N/A	N/A
27	N/A	N/A	N/A	N/A	N/A	N/A	N/A
28	N/A	N/A	N/A	N/A	N/A	N/A	N/A
29	N/A	N/A	N/A	N/A	N/A	N/A	N/A
30	N/A	N/A	N/A	N/A	N/A	N/A	N/A
31	N/A	N/A	N/A	N/A	N/A	N/A	N/A
32	N/A	N/A	N/A	N/A	N/A	N/A	N/A
33	N/A	N/A	N/A	N/A	N/A	N/A	N/A
34	N/A	N/A	N/A	N/A	N/A	N/A	N/A
35	N/A	N/A	N/A	N/A	N/A	N/A	N/A
36	N/A	N/A	N/A	N/A	N/A	N/A	N/A
37	N/A	N/A	N/A	N/A	N/A	N/A	N/A
38	N/A	N/A	N/A	N/A	N/A	N/A	N/A
39	N/A	N/A	N/A	N/A	N/A	N/A	N/A
40	N/A	N/A	N/A	N/A	N/A	N/A	N/A
41	N/A	N/A	N/A	N/A	N/A	N/A	N/A
42	N/A	N/A	N/A	N/A	N/A	N/A	N/A
43	N/A	N/A	N/A	N/A	N/A	N/A	N/A
44	N/A	N/A	N/A	N/A	N/A	N/A	N/A
45	N/A	N/A	N/A	N/A	N/A	N/A	N/A
46	N/A	N/A	N/A	N/A	N/A	N/A	N/A
47	N/A	N/A	N/A	N/A	N/A	N/A	N/A
48	N/A	N/A	N/A	N/A	N/A	N/A	N/A
49	N/A	N/A	N/A	N/A	N/A	N/A	N/A
50	N/A	N/A	N/A	N/A	N/A	N/A	N/A
51	N/A	N/A	N/A	N/A	N/A	N/A	N/A
52	N/A	N/A	N/A	N/A	N/A	N/A	N/A
53	N/A	N/A	N/A	N/A	N/A	N/A	N/A
54	N/A	N/A	N/A	N/A	N/A	N/A	N/A
55	N/A	N/A	N/A	N/A	N/A	N/A	N/A
56	N/A	N/A	N/A	N/A	N/A	N/A	N/A
57	N/A	N/A	N/A	N/A	N/A	N/A	N/A
58	N/A	N/A	N/A	N/A	N/A	N/A	N/A
59	N/A	N/A	N/A	N/A	N/A	N/A	N/A
60	N/A	N/A	N/A	N/A	N/A	N/A	N/A
61	N/A	N/A	N/A	N/A	N/A	N/A	N/A
62	N/A	N/A	N/A	N/A	N/A	N/A	N/A
63	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Rocky Flats Environmental Technology Site

Golden, CO 80402-0464

Safety and Hygiene Chain of Custody Record and Analysis Request

RFP F 3791.32 (7/95)
Formerly RIF-47530

Name of Originator: D. Babs Title: IHS 7117A/Bldg/Ext: 615-101 Date: 7/2/2001 Page 1 of 2

SAMPLE NUMBER Bldg/Y/M/D/P#/S#	ANALYZE FOR	VOLUME liters	SAMPLE TIME/	MEDIA	P		REMARKS	Lab Number
					A	B		
616-11262001-315-101	DE	NA	NA	NA			NR61601	
616-11262001-315-102								
616-11262001-315-103								
616-11262001-315-104								
616-11262001-315-105								
617-11262001-315-101								
617-11262001-315-102								
617-11262001-315-103								
617-11262001-315-104								
617-11262001-315-105								
617-11262001-315-106								
617-11262001-315-107								
617-11262001-315-108								
617-11262001-315-109								
617-11262001-315-110								
618-11262001-315-101								

Relinquished by	Received by	Time/Date	Relinquished by	Received by	Time/Date
<u>D. Babs</u>	<u>Agency</u>	<u>08/14/7/3/01</u>			
Relinquished by	Received by	Time/Date	Relinquished by	Received by	Time/Date
Relinquished by	Received by	Time/Date	Relinquished by	Received by	Time/Date
Relinquished by	Received by	Time/Date	Relinquished by	Received by	Time/Date

Report and Billing Instruction

Kaiser-Hill ☒ Verbal To: DAVID BA333

RAMRS ☐ Fax To: X 4717

SSOC ☐ Report To: KH

DynCorp ☐ Report To: KH

WSI ☐ P.O.#/Release: ED 50120

Lab: D. Babs

Asbestos Samples

Industrial Hygiene Sample ☐

Rush ☐ Other ☐

Asbestos Samples ☐

Standard Service ☐

Signature: D. Babs

Comments:

Condition of Seal: ☐ Broken ☐ Unbroken

Signature: D. Babs

Comments:

Blue - Originator

Rocky Flats Environmental Technology Site

Golden, CO 80402-0464

Safety and Hygiene Chain of Custody Record and Analysis Request

Name of Originator: D. B. 333 Title: THES Bldg/Ext: 7117A/X 9711 Date: 7/2/2011 Page 2 of 2

ANALYZE FOR VOLUME SAMPLE MEDIA P Personal A Area B Bulk REMARKS Lab Number

666-0020201-315-102 BC NA NA 3 NA01A11
666-0020201-315-103
666-0020201-315-104
666-0020201-315-105
666-0020201-315-106

Relinquished by Received by Time/Date Relinquished by Received by Time/Date
Relinquished by Received by Time/Date Relinquished by Received by Time/Date
Relinquished by Received by Time/Date Relinquished by Received by Time/Date
Relinquished by Received by Time/Date Relinquished by Received by Time/Date

Report and Billing Instruction Verbal To: D. B. 333 X
Fax To: X. 4717
Report To: KH
Bill To: KH
RFP Reference: EES0020
Kaiser-Hill ☒ FMRS ☐ SSOG ☐ DnCOP ☐
Analysis Request Industrial Hygiene Sample ☐ Push ☐ Other ☐
Asbestos Samples ☐ 24 ☐ Push ☐ Other ☐
Seal# (Release #) Condition of Seal: ☐ Broken ☐ Unbroken
Signature: Unable to verify PIN
Comments: 0101003 of 113101

RCRA/CERCLA Constituents Data Summary
One Sample Location: Room 145 Engineered, Concrete Trough
Sample Media: Oil

Sample Number	Sample Analyses	Result ($\mu\text{g/L}$)
01S0083-002 001	TCLP VOAs	TCLP VOAs less than regulatory limits
01S0083-002 001	TCLP SVOAs	TCLP SVOAs less than regulatory limits
01S0083-002 001	TCLP Metals	TCLP Metals less than regulatory limits

Metals Analyzed

Analyte	Regulatory limit (mg/L)
Arsenic (D004)	50
Barium (D005)	1000
Cadmium (D006)	10
Chromium (D007)	50
Lead (D008)	50
Mercury (D009)	0.2
Selenium (D010)	10
Silver (D011)	50

DRAFT

See table on next page

Volatile Organics Analyzed

Analyte	Regulatory limit (mg/L)
Vinyl Chloride (D043)	0.2
1,1-Dichloroethene (D029)	0.7
Chloroform (D022)	6.0
1,2-Dichloroethane (D028)	0.5
2-Butanone (D035)	200.0
Carbon Tetrachloride (D019)	0.5
Trichloroethene (D040)	0.5
Benzene (D018)	0.5
Tetrachlorobenzene (D039)	0.7
Chlorobenzene (D021)	100.0
1,4-Dichlorobenzene (D027)	7.5

PCB Data Summary

One Sample Location: Room 145 Engineered, Concrete Trough
Sample Media: Oil

Sample Number	Congener	Results* (ug/L)
01S0083-001 001	All PCB Congeners	Not Detected

D2-AFA

20



KAISER-HILL
COMPANY
ANALYTICAL SERVICES DIVISION

*all analytes
mon. detect*

FAX COVER SHEET FOR FINAL DATA PACKAGE REPORTS

RIN NUMBER: 0150083 PCM

FROM: SKIP NIELSEN

PHONE: (303) 966-4289

FAX: (303) 966-8345

TO: M. S. Hoffer

FAX: 6678

PHONE: _____

NUMBER OF PAGES, INCLUDING COVER SHEET: _____

Please contact _____ if the fax is not received in its entirety.
(phone number)

NOTE:

This facsimile contains the results, in the Final Sample Data Package, for the analytes requested in this RIN. The package has been scheduled for verification or validation. Until verification or validation is completed the results must be considered preliminary. You will be forwarded a copy of the verification or validation report shortly after it is received by ASD. You should examine this report to determine if any qualifiers (flags) have been attached to the results. Flagged data may or may not be suitable for use as originally intended and should be evaluated for acceptability before use. If you have any questions please contact your Analytical Services Project Lead, do not contact the laboratory directly.

61

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# 01S0083#002

Page 1 of 1

Sample No.	76	Requester	STAFFER, MATI/NIELSEN, SKIP	Telephone No.	43754289
Lab	01S0083	Sampling Origin	BLDG. 865 RM. 145 FL. TRENCH	Purchase Order/Change Code	EED50120
Protocol	1	Logbook No.	99 Step 1/AN	Ice Chest No.	
Temp		Method of Shipment	Sample Team	Box of Loading/Air Bill No.	4533 2127 5542
Related COC (if any)	01S0083 #001	PRE			

POSSIBLE SAMPLE HAZARDS/REMARKS	SPECIAL INSTRUCTIONS	Hold Time
Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table II? YES or NO	SCREENING REQUIRED <input type="checkbox"/>	
Are other known hazardous substances present? YES or NO		
*** **		

Boile No	Customer Number	Matrix	Date	Time	Location	Container (size/quantity)	Sample Analysis	Preservative, Packaging
01S0083-001 002	01000204	SOLID	6/27/01	0812	BLDG. 865 RM. 145 FLOOR TRENCH	125-ML / AG / I	SS03B002 (PCB/Pest CLP-Solid) [Routine]	None 4 degress C
01S0083-001 003		SOLID		0826	BLDG. 865 RM. 145 FLOOR TRENCH	125-ML / G / I	SS08C006 (TCCLP Metals 1311) [Routine]	None 4 degress C
01S0083-001 004		SOLID		0918	BLDG. 865 RM. 145 FLOOR TRENCH	60-ML / G / I	SS08C010 (TCCLP VOA 1311/8260) [Routine]	None 4 degs C w/zh
01S0083-001 005		SOLID		0814	BLDG. 865 RM. 145 FLOOR TRENCH	125-ML / AG / I	SS08C011 (TCCLP Semi VOA 1311/8270B) [Routine]	None 4 degs C w/zh
01S0083-002 001	01000203	AQUEOUS	6/27/01	0715	BLDG. 865 RM. 145 FLOOR TRENCH	40-ML / G / I	SS01B005 (VOA 8260-Water) [Routine]	None 4 degs C w/zh
01S0083-002 002		AQUEOUS			BLDG. 865 RM. 145 FLOOR TRENCH	40-ML / G / I	SS01B005 (VOA 8260-Water) [Routine]	None 4 degs C w/zh
01S0083-002 003		AQUEOUS			BLDG. 865 RM. 145 FLOOR TRENCH	40-ML / G / I	SS01B005 (VOA 8260-Water) [Routine]	None 4 degs C w/zh

Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
TS. Balli	6-27-01 0925	T130A REF #2	0925				
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
T130A Ref #2	6/27/01 0955	Sh Chundman	6/27/01 0955				
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
Sh Chundman	6/27/01 1500	Fuel Ex					
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
Fuel Ex	6-29-01 9100	Carla King	6-29-01 9.00				

FINAL SAMPLE DISPOSITION	Disposed By	Date/Time

* Final Sample Disposition Method (e.g., returned to customer, disposed of per procedure, used in analytical process)



Analytical Report

Client: K-11 RIN#01S0083
LVL#: 0106L204

W.O.#: 11830-001-001-9999-00
Date Received: 06-29-01

PESTICIDE/PCB

One (1) water sample was collected on 06-27-01

The sample was extracted on 07-03-01 and analyzed according to criteria set forth in the Contract Laboratory Program 3/90 (OLM3.1) SOW for PCB target compounds on 07-13,24-01


The following is a summary of the QC results accompanying the sample results and a description of any problems encountered during their analyses

- 1 Linearity and breakdown criteria were met for each of the analytical columns
- 2 Retention time criteria were met for all compounds on both analytical columns.
- 3 Resolution of all pesticides in the Resolution Check Standard were within EPA QC limits
- 4 The RPDs of the pesticides in the Individual Mixes analyzed for calibration verification were within 25% for both analytical columns
- 5 The RPDs of the pesticides in the Performance Evaluation Mixes analyzed for calibration verification were within 25% for both analytical columns
- 6 ~~Nine (9) of the ten (10) surrogate recoveries were within the advisory LPA QC limits~~
Surrogate recoveries are summarized on the Form 2 included in the data package.
- 7 ~~One (1) of the ten (10) spike recoveries was within EPA QC limits.~~
- 8 ~~All of the ten (10) recoveries were within EPA QC limits~~ Matrix spike recoveries are summarized on the Form 3 included in the data package. A copy of the Sample Discrepancy Report (SDR) has been enclosed
- 9 Recoveries of pesticides for the Florisil Cartridge Check were within EPA QC limits

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 111 pages

63

10 As of January 27, 2001, Recra Labnet Philadelphia became Lionville Laboratory Incorporated Some forms may still reference Recra Labnet Philadelphia



Jan Daniels

Deputy Laboratory Manager

Lionville Laboratory Incorporated

path: \group\data\pc\st\06L 204clp.pcb

7/27/01
Date



64

13

Sample Information	RFMH - Matrix D F Units	001 MS		001 MSD		01LE0790-MS1		01LE0790-MS1	
		WATER		WATER		WATER		WATER	
		1.00	UG/L	1.00	UG/L	1.00	UG/L	1.00	UG/L
Alpha-BHC		1.0	U	1.0	U	5.0	U	0.050	U
Beta-BHC		1.0	U	1.0	U	5.0	U	0.050	U
Delta-BHC		1.0	U	1.0	U	5.0	U	0.050	U
gamma-BHC (Lindane)		1.0	U	36 *	%	42 *	%	0.050	U
Heptachlor		1.0	U	22 *	%	22 *	%P	0.050	U
Aldrin		1.0	U	12 *	%	16 *	%P	0.050	U
Heptachlor epoxide		1.0	U	1.0	U	5.0	U	0.050	U
Endosulfan I		1.0	U	1.0	U	5.0	U	0.050	U
Dielsrin		2.0	U	8 *	%P	33 *	%P	0.10	U
4,4'-DDE		2.0	U	2.0	U	10	U	0.10	U
Endrin		2.0	U	32 *	%	40 *	%	0.10	U
Endosulfan II		2.0	U	2.0	U	10	U	0.10	U
4,4'-DDD		2.0	U	2.0	U	10	U	0.10	U
Endosulfan sulfate		2.0	U	2.0	U	10	U	0.10	U
4,4'-DDT		2.0	U	13 *	%	19 *	%	0.10	U
Methoxychlor		10	U	10	U	50	U	0.50	U
Endrin ketone		2.0	U	2.0	U	10	U	0.10	U
Endrin aldehyde		2.0	U	2.0	U	10	U	0.10	U
alpha-Chlordane		1.0	U	1.0	U	5.0	U	0.050	U
gamma-Chlordane		1.0	U	1.0	U	5.0	U	0.050	U
Toxaphene		100	U	100	U	500	U	5.0	U
Aroclor-1016		20	U	20	U	100	U	1.0	U
Aroclor-1221		40	U	40	U	200	U	2.0	U
Aroclor-1232		20	U	20	U	200	U	1.0	U
Aroclor-1242		20	U	20	U	100	U	1.0	U
Aroclor-1248		20	U	20	U	200	U	1.0	U
Aroclor-1254		20	U	20	U	100	U	1.0	U
Aroclor-1260		20	U	20	U	100	U	1.0	U

U= Analyzed, not detected J= Present below detection limit. B= Present in blank NR= Not requested NS= Not spiked
% = Percent recovery. D= Diluted out. I= Interference YA= Not Applicable *= Outside of Advisory limits
P= Difference between columns exceeds 25%.

785-1257
10/21/2010

5

4C
ORGANICS METHOD BLANK SUMMARY

CLIENT SAMPLE NO

Lab Name Lionville Labs, IncContract: 1830-01-01

PBLKJU

Client K-H RIN#01S0083Lab Sample ID 01LE0790-MH1Lab File ID 07120107.35Matrix (soil/water) WATERExtraction (SepF/Cont/Sonc) CONTSulfur Cleanup (Y/N) NDate Extracted 07/10/01Date Analyzed (1) 07/13/01Date Analyzed (2) 07/13/01Time Analyzed (1) 1355Time Analyzed (2) 1355Instrument ID (1) 07Instrument ID (2) 08GC Column (1) DR608 ID: 0.53 (mm)GC Column (2) 1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	CLIENT SAMPLE NO	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	01S0083-001	0106L204-001	07/13/01	07/13/01
02	01S0083-001	0106L204-001S	07/13/01	07/13/01
03	01S0083-001	0106L204-001T	07/13/01	07/13/01
04	PBLKJUBS	01LE0790-MB1S	07/24/01	07/24/01

COMMENTS

1D
 ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

0180083-001.002

Lab Name Ligonville Labs, Inc Work Order 11830-001-001-9999-00Client K-H RIN#0180083Matrix (soil/water) WATERLab Sample ID. 0106L204-001Sample wt/vol 50.0 (g/mL) MLLab File ID 07120107.32* Moisture decanted (Y/N) ..Date Received 06/29/01Extraction (SepF/Cont/Sonc) CONTDate Extracted 07/10/01Concentrated Extract Volume 10000 (uL)Date Analyzed: 07/13/01Injection Volume 0.5 (uL)Dilution Factor 1.00GPC Cleanup (Y/N) N pH 7.0Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS UG/L	Q
319-84-6	Alpha-BHC	1.0	U
319-85-7	Beta-BHC	1.0	U
319-86-8	Delta-BHC	1.0	U
58-89-9	gamma-BHC (Lindane)	1.0	U
76-44-8	Heptachlor	1.0	U
309-00-2	Aldrin	1.0	U
1024-57-3	Heptachlor epoxide	1.0	U
959-98-8	Endosulfan I	1.0	U
60-57-1	Dieldrin	2.0	U
72-55-9	4,4'-DDE	2.0	U
72-20-8	Endrin	2.0	U
33213-65-9	Endosulfan II	2.0	U
72-54-8	4,4'-DDD	2.0	U
1031-07-8	Endosulfan sulfate	2.0	U
50-29-3	4,4'-DDT	2.0	U
72-43-5	Methoxychlor	10	U
53494-70-5	Endrin ketone	2.0	U
7421-93-4	Endrin aldehyde	2.0	U
5103-71-9	alpha-Chlordane	1.0	U
5103-74-2	gamma-Chlordane	1.0	U
8001-35-2	Toxaphene	100	U
12674-11-2	Aroclor-1016	20	U
11104-28-2	Aroclor-1221	40	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	20	U

2/24/01

67



KAISER-HILL
COMPANY
ANALYTICAL SERVICES DIVISION

*all analytes
non detect*

FAX COVER SHEET FOR FINAL DATA PACKAGE REPORTS

RIN NUMBER: 0150083 TCLP U09

FROM: SKIP NIELSEN

PHONE: (303) 966-4289

FAX: (303) 966-8345

TO: M Schreff

FAX: 6678

PHONE: _____

NUMBER OF PAGES, INCLUDING COVER SHEET: _____

Please contact _____ if the fax is not received in its entirety.
(phone number)

NOTE:

This facsimile contains the results, in the Final Sample Data Package, for the analytes requested in this RIN. The package has been scheduled for verification or validation. Until verification or validation is completed the results must be considered preliminary. You will be forwarded a copy of the verification or validation report shortly after it is received by ASD. You should examine this report to determine if any qualifiers (flags) have been attached to the results. Flagged data may or may not be suitable for use as originally intended and should be evaluated for acceptability before use. If you have any questions please contact your Analytical Services Project Lead, do not contact the laboratory directly.



Client - K-H RIN # 01S0083
LVL #: 01061204

W.O. #: 11830-001-001-9999-00
Date Received: 06-29-2001


GC/MS VOLATILE-TCLP

One (1) filtrate sample was generated on 07-09-2001 from a water sample collected on 06-27-2001

The sample and its associated QC samples were analyzed according to criteria set forth in Lionville Laboratory OPs based on SW 846 Method 8260B for 1 CLP Volatile target compounds on 07-13-2001

The following is a summary of the QC results accompanying these sample results and a description of any problems encountered during their analyses

- 1 The cooler temperature upon receipt has been recorded on the chain-of-custody
2. The sample was analyzed within required holding time
3. The sample was analyzed at five-fold dilution due to the filtrate matrix
4. All surrogate recoveries were within EPA QC limits
- 5 All matrix spike recoveries were within EPA QC limits
6. All blank spike recoveries were within EPA QC limits
- 7 Internal standard area and retention time criteria were met.
- 8 Manual integrations are performed according to OP L-QA-125 to produce quality data with the utmost integrity. All manual integrations are required to be technically valid and properly documented. Appropriate technical flags are defined in the Glossary ("Technical Flags For Manual Integration")


Michael Taylor
President
Lionville Laboratory Incorporated

7/19/01
Date

[illegible]

The results presented in this report relate only to the analytical testing and conditions of the sample as receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 21 pages.

Commodore Advance Sciences

SUMMARY

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

01S0083#002

Page 1 of 1

Sample No.	01S0083	Project Title	FLOOR TRENCH excavated in a 55 gal. drum (Lab)	Customer Name	Lionville Laboratory Inc	Protocol	CAS-SP-003	Special Instructions	Hold Time
Requester Name	SILVER MATCO/NIELSEN, SKIP	Sampling Origin	BLDG 865 RM 145 FLOOR TRENCH	Logbook No.	99 Step 1/AW	Method of Shipment	Sample Team	Related COC (if any)	01S0083 #001
Telephone No.	43754289	Purchase Order/Charge Code	EED50120	Ice Chest No.		Temp.		BIB of Lading/Air Bill No.	4533 2127 5542
<p align="center">SCREENING REQUIRED</p> <input type="checkbox"/>									
Botle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative Packaging	Date/Time
01S0083-001.002	01006204	SOLID	4/27/01	0812	BLDG 865 RM 145 FLOOR TRENCH	125-ML / AG / I	SS03B002 (PCB/Pest CLP-Solid) [Routine]	None 4 degrees C	
01S0083-001.003		SOLID		0826	BLDG 865 RM 145 FLOOR TRENCH	125-ML / G / I	SS08C006 (TCLP Metals 1311) [Routine]	None 4 degrees C	
01S0083-001.004		SOLID		0918	BLDG 865 RM 145 FLOOR TRENCH	60-ML / G / I	SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs	
01S0083-001.005		SOLID		0914	BLDG 865 RM 145 FLOOR TRENCH	125-ML / AG / I	SS08C011 (TCLP Semi VOA 1311/8270B) [Routine]	None 4 degs C w/zhs	
01S0083-002.001	01006203	AQUEOUS	4/27/01	0715	BLDG 865 RM 145 FLOOR TRENCH	40-ML / G / I	SS01B005 (VOA 8260-Water) [Routine]	None 4 degs C w/zhs	
01S0083-002.002		AQUEOUS			BLDG 865 RM 145 FLOOR TRENCH	40-ML / G / I	SS01B005 (VOA 8260-Water) [Routine]	None 4 degs C w/zhs	
01S0083-002.003		AQUEOUS			BLDG 865 RM 145 FLOOR TRENCH	40-ML / G / I	SS01B005 (VOA 8260-Water) [Routine]	None 4 degs C w/zhs	
Relinquished By	KS Bell 6-27-01 0925	Received By	T130A REF #2	6-27-01 0925	Relinquished By	Received By	Date/Time	Date/Time	
Relinquished By	T130A Ref #2 6/27/01 0955	Received By	JH Chumstern 6/27/01 0955		Relinquished By	Received By	Date/Time	Date/Time	
Relinquished By	JH Chumstern 6/27/01 1500	Received By	Fuel Ex		Relinquished By	Received By	Date/Time	Date/Time	
Relinquished By	Fuel Ex 6-29-01 9108	Received By	Color Key	6-29-01 9.00	Relinquished By	Received By	Date/Time	Date/Time	
<p align="center">FINAL SAMPLE DISPOSITION</p>									
Disposal Method (e.g., returned to customer, disposed of per procedure, used as analytical process)									

Lionville Laboratory, Inc.

Volatiles by GC/MS, TCLP Leachate

Report Date 07/17/01 22-29

RFW Batch Number: 0106L204

Client K-H RIN#01S0083

Work Order 11830001001 Page: 1a

Cust ID: 01S0083-001. 01S0083-001.

004 004

Sample RFW#: 006

Information Matrix WATER

D.F. 5.00

Units ug/L

VBLKGG BS ICHBLK

01LVN144-MB1 01LVN144-MB1 01LTV030-LB1

WATER WATER WATER

1.00 1.00 5.00

ug/L ug/L ug/L

Toluene-d8		103	%	100	%	105	%	100	%	101	%
Surrogate	Bromofluorobenzene	95	%	93	%	98	%	96	%	95	%
Recovery	1,2-Dichloroethane-d4	100	%	102	%	103	%	95	%	96	%
-----f1											

*= Outside of EPA CLP QC limits

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: Lionville Laboratory Inc Contract: 11830-001-001-9999-00
Lab Code LVLI Case No. SAS No SDG No 06L204
Lab File ID. N071304 Lab Sample ID 01LVN144-MB1
Date Analyzed 07/13/1 Time Analyzed 1146
Matrix: (soil/water) WATER Level: (low/med) LOW
Instrument ID 5972N

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VBKGGBS	01LVN144-MB1S	N071303	1109
02	LCHBLK	01LTV030-LB1	N071311	1634
03	01S0083-001.004	0106L204-006	N071312	1711
04	01S0083-001 004MS	0106L204-006S	N071313	1749
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS

1A
VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO

01S0083-001 004

Lab Name Lionville Labs, Inc. Contract 11830001001Lab Code Lionvi Case No _____

SAS No : _____ SDG No . _____

Matrix (soil/water) WATERLab Sample ID 01061204-006Sample wt/vol 5.00 (g/mL) MLLab File ID 0071312Level (low/med) LOWDate Received 06/29/01

% Moisture, not dec _____

Date Analyzed 07/13/01Column (pack/cap) CAPDilution Factor: 5.00

CAS NO COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

75-01-4-----	Vinyl Chloride	50	U
75-35-4-----	1,1-Dichloroethene	25	U
67-66-3-----	Chloroform	25	U
107-06-2-----	1,2-Dichloroethane	25	U
78-93-3-----	2-Butanone	50	U
56-23-5-----	Carbon Tetrachloride	25	U
79-01-6-----	Trichloroethene	25	U
71-43-2-----	Benzene	25	U
127-18-4-----	Tetrachloroethene	25	U
108-90-7-----	Chlorobenzene	25	U
541-73-1-----	1,3-Dichlorobenzene	25	U
106-46-7-----	1,4-Dichlorobenzene	25	U
95-50-1-----	1,2-Dichlorobenzene	25	U

FORM 1 V-1

1/87 Rev



KAISER-HILL
COMPANY
ANALYTICAL SERVICES DIVISION

*all analytes
un-detected*

FAX COVER SHEET FOR FINAL DATA PACKAGE REPORTS

RIN NUMBER: 0150083 JCLP \$100

FROM: SKIP NIELSEN

PHONE: (303) 966-4289

FAX: (303) 966-8345

TO: M S hyfer

FAX: 6878

PHONE: _____

NUMBER OF PAGES, INCLUDING COVER SHEET: _____

Please contact _____ if the fax is not received in its entirety.
(phone number)

NOTE:

This facsimile contains the results, in the Final Sample Data Package, for the analytes requested in this RIN. The package has been scheduled for verification or validation. Until verification or validation is completed the results must be considered preliminary. You will be forwarded a copy of the verification or validation report shortly after it is received by ASD. You should examine this report to determine if any qualifiers (flags) have been attached to the results. Flagged data may or may not be suitable for use as originally intended and should be evaluated for acceptability before use. If you have any questions please contact your Analytical Services Project Lead, do not contact the laboratory directly.



Client : K-H RIN # 01S0083
RFW#: 0106L204

W.O. #: 11830-001-001-9999-00
Date Received: 06-29-2001

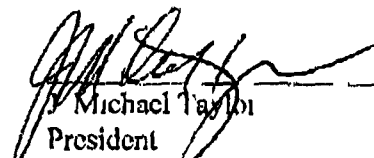
SEMIVOLATILE

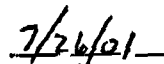
One (1) filtrate sample was generated on 07-09-2001 from a flammable liquid sample collected on 06-27-2001

The sample and its associated QC samples were extracted on 07-11-2001 and analyzed according to criteria set forth in Lionville Laboratory OPs based on SW 846 Method 8270C for 1 CLP Semivolatile target compounds on 07-18-2001

The following is a summary of the QC results accompanying the sample results and a description of any problems encountered during their analyses

- 1 The cooler temperature upon receipt has been recorded on the chain-of-custody.
- 2 The sample was extracted and analyzed within required holding times
- 3 The sample was extracted at 8-fold dilution due to limited sample volume and required an additional 2-fold dilution prior to analysis due to high levels of non-target compounds.
- 4 All surrogate recoveries were within LPA QC limits
- 5 All blank spike recoveries were within LPA QC limits
- 6 Internal standard area and retention time criteria were met
- 7 Manual integrations are performed according to OP L-QA-125 to produce quality data with the utmost integrity. All manual integrations are required to be technically valid and properly documented. Appropriate technical flags are defined in the Glossary ("Technical Flags For Manual Integration")


Michael Taylor
President
Lionville Laboratory Incorporated


Date

nom\group\int\brink-h rin 0106L204.doc

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 106 pages.

06

75

Lionville Laboratory, Inc.

Report Date 07/19/01 15:35

Semivolatiles by GC/MS, TCLP Leachate

Page: 2a

RFW Batch Number 0106L204

Client K-H RIN#0150083

Work Order 11830001001

LCHBLK

SBLKCA BSD

SBLKCA BS

SBLKCA

Cust ID 0150083-001.

005

Sample

Information

RFW#

Matrix:

D.F..

Units:

007

WATER

2.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

1.00

MG/L

01LE0821-MB1

WATER

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: Lionville Labs, Inc.Contract 1830-01-01Case No K-H RIN#01S0083Lab File ID: D071811Lab Sample ID 01LE0821-MB1Date Extracted: 07/11/01Extraction (SepF/Cont/Sonc) CONTDate Analyzed 07/18/01Time Analyzed: 1529Matrix: (Soil/Water) WATERLevel (low/med) LOWInstrument ID 5972d

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD.

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	SEIKCALE0821-MB1 BS	01LE0821-MB1S	D071812	07/18/01
02	SEIKCALE0821-MB1 BSD	01LE0821-MB1T	D071813	07/18/01
03	LCHBLK	01LTR080-LB1	D071814	07/18/01
04	01S0083-001 005	0106L204-007	D071815	07/18/01

COMMENTS:

18
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

Lab Name: Lionville Labs, Inc. Work Order 1183000100101S0083-001 005Client K-H RJN#01S0083Matrix (soil/water) WATERLab Sample ID: 0106L204-007Sample wt/vol: 130 (g/mL) MLLab File ID D071815Level: (low/med) LOWDate Received 06/29/01% Moisture decanted. (Y/N) Date Extracted 07/11/01Concentrated Extract Volume 1000 (uL)Date Analyzed 07/18/01Injection Volume, 2.0 (uL)Dilution Factor: 2.00GPC Cleanup. (Y/N) NpH 6.0

CONCENTRATION UNITS:

CAS NO

COMPOUND

(ug/L or ug/Kg) MG/L

Q

110-86-1-----	Pyridine	0.15	U
106-46-7-----	1,4-Dichlorobenzene	0.15	U
95-48-7-----	2-Methylphenol	0.15	U
106-44-5-----	3- and/or 4-Methylphenol	0.15	U
67-72-1-----	Hexachloroethane	0.15	U
98-95-3-----	Nitrobenzene	0.15	U
87-68-3-----	Hexachlorobutadiene	0.15	U
88-06-2-----	2,4,6-Trichlorophenol	0.15	U
95-95-4-----	2,4,5-Trichlorophenol	0.38	U
121-14-2-----	2,4-Dinitrotoluene	0.15	U
118-74-1-----	Hexachlorobenzene	0.15	U
87-86-5-----	Pentachlorophenol	0.38	U

FORM 1 SV-1

RFW (v3 3)

SARF ID

5/29/2001

12:29:13 PM

Skip NELSON x4289
Sampling and Analysis Request Form

This form is best viewed at a screen resolution of 1024x768

Required fields are denoted by **Bold Red** labels

If you require a copy of this submission for your records, please note this to your Project Lead following your submission, and a PDF document will for you. Please help us save resources by not printing this form

View a sample SARF in PDF format

SARF ID

5/24/2001 1 32 42 PM

Project Charge No.

Select a Charge Number

EED50120

AST Project Code

Industrial and Site Services Project

AST Task Code

D&D Program

Owner ID.

D&D - Decon and Decomission

Requestor

First Name

Matthew

Last Name

Shafer

Phone:

4375

Pager:

Secondary Contact.

First Name

Duane

Last Name

Parsons

Phone:

6458

Pager:

3734

Fax Data Results To

First Name

Matthew

Last Name

Shafer

Fax

6678

2nd Fax:

Sample Information

Sample Location

B865, rm 145

Sample Description and Identifiers

One Sample Location, 2 liquid and 2 sludge samples

Number of Events Container ID Required ☐ No

Sample Matrix Aqueous: ☐ Yes ☒ No Org. Liquid: ☐ Yes ☒ No Solid: ☐ Yes ☒ No
Sludge: ☐ Yes ☒ No Multi Phase: ☐ Yes ☒ No

Planned Sampling Date

Date Data Required

90 Day Area? ☐ No ☒ Yes 90 Day Start Date

90 Day End Date

Estimated Quantity Available for Sampling WEC/DC:

Waste Stream ID No Waste Stream Name

EPA Codes

MSDS ☐ No ☒ Yes Attached ☐ No ☒ Yes

Does the sample contain any known DOT hazardous materials/substances per 49CFR/172.101? ☐ Unkr ☒ Yes

If Yes, Describe

Analyses Requested

Alpha/Beta Screen	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Gross Alpha/Beta	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Isotopics	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes g/l	Gamma Spec	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Nitrate	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	Nitrite	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Total VOAs	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	TCLP VOAs	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Total SVOAs	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	TCLP SVOAs	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Metals	w/fg <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	Total	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Total PCBs	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	TCLP PCBs	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
pH	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	Fingerprint	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
IR	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	Reactive Cyanide	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Amenable Cyanide	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	Total Cyanide	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Sulfate	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	Sulfide	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Utah Lab Cert Req'd	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes		
Analyses Criticality Sensitive?	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	If Yes	<input type="checkbox"/> None <input checked="" type="checkbox"/> Yes
SAP ID	<input type="text" value=""/>	IWCP #	<input type="text" value="MET-A-031"/>
Other	Toxicity Characteristic Inorganics (MIS-A-008, Method 13) Toxicity Characteristic Pesticides (PEP-A-005, SW-846)		

Radiological Entry Requirements

Potential Rad ☐ No ☒ Yes Area Postina ☐ No ☒ Yes

Materials/Contamination

Pre-Job Walkdown

☐ No

RCT Support

☐ No

RWP Required

☐ NoRad Engineer
Concurrence

Glovebox

Pre-Evolution Briefing

Radiological Evaluation
(RE) CompletedRAM Transfer Tag
Required

Comments

Please call M Thayer if any
questions (x 4375)

General Entry Requirements/Safety Concerns

Plan of the Day

☐ NoIndustrial Hygiene
Assistance☐

IWCP

☐ No

Confined Space

☐

Carcinogen Control Area

☐ No

Personnel Monitoring

☐

Asbestos

☐ No

Other



81

Property

Waste SampleXX

RELEASE EVALUATION FORM**Page 1 of 3**

Release Evaluation No 010604-T130C-001 EXTENDED yes EXPIRES 31 DEC 2001 Charge number NA
PART I SENDER/CUSTODIAN
ACKNOWLEDGMENT

Description of Property/Waste/Sample To Be Released/ LIQUID AND SLUDGE SAMPLES SAMPLES FROM TRENCHES
LOCATED IN BUILDING 865 RIN NUMBER 01S0083

Current Location SAMPLE LOCATION LISTED ABOVE IN DESCRIPTION OF PROPERTY SECTION

Destination LIONVILLE LABS, 208 WELSH POOL ROAD, LIONVILLE PENNSYLVANIA 19341-1225

Recipient/Custodian LIONVILLE LABS, 208 WELSH POOL ROAD, LIONVILLE PENNSYLVANIA 19341-1225

History/Process Knowledge THESE SAMPLES HAVE BEEN GENERATED TO CHARACTERIZE THE TRENCHES IN
BUILDING 865

Has the specified material ever been in an RMMA/RBA/CA or contacted DOE controlled radioactive materials? YES

- 1) By signing below, I certify information provided in Part I of this release evaluation to be true and accurate
- 2) By signing below, I agree to comply with the specific requirements noted in Part II of this release evaluation

Sender/Custodian

Date 06/04/01

Ext 4375

RSFORMS-9.01-01

PART II

RADIOLOGICAL ENGINEERING

SPECIFIC REQUIREMENTS AND/OR COMMENTS

- 1 The sender/custodian shall obtain a DOT RAD SCREEN for each sample (duplicate/REPLICATE sampling method) ACCEPTANCE CRITERIA SHALL BE LESS THAN 2 NANOCURIES PER GRAM
- 2 The RCT shall perform contamination surveys of the external portion of each sample container in accordance with RSP 7 02 The RCT shall provide the sender/custodian a copy of the survey ACCEPTANCE CRITERIA SHALL BE LESS THAN 20 DPM/100CM2 (ALPHA) AND LESS THAN 1000 DPM/100CM2 (BETA0
- 3 The sender/custodian shall provide Radiological Engineering with a copy of the survey and lab data
- 4 LIONVILLE LABS, 208 WELSH POOL ROAD, LIONVILLE PENNSYLVANIA 19341-1225 OPERATES UNDER NRC RADIOACTIVE MATERIAL LICENSE 37-19378-01 THAT EXPIRES ON 30 APRIL 2001 AND IS NOW OPERATING UNDER NRC EXTENSION LETTER 129409 DATED MARCH 14, 2001
- 5 CASI SHALL RETAIN A COPY OF OF ALL DOCUMENTS REQUIRED BY THIS RELEASE EVALUATION AND MAKE AVAILABLE TO RADIOLOGICAL ENGINEERING A COPY OF THIS RELEASE EVALUATION FOR AUDITING PURPOSES
- 6 THE SENDER/CUSTODIAN SHALL RETAIN A COPY OF THIS RELEASE EVALUATION AS WELL AS SUPPORTING DOCUMENTS

The samples specified in Part 1 of this release evaluation are being provided with authorization for transport as non-radioactive materials in accordance with Department of Transportation (49 CFR) regulations This authorization for shipment does not constitute an unrestricted release

Evaluated

Radiological Engineer

Date

6/04/01 Ext 6385

APPROVAL FOR TRANSFER/SHIPMENT

Approved

Radiological Engineer

Date

06-05-01 Ext 3461

SAMPLE RELEASE 010604-T130C-001

PROPERTY/WASTE RELEASE EVALUATION SIGNATURE REQUIREMENTS

Release Evaluation #: 010604-T130C-001 Page 3 of __3__

Release Evaluation for Waste:

A Release Evaluation for Waste requires an evaluation and unrestricted release approval signature. The evaluation signature is by the Radiological Engineer (RE) providing the methods or criteria for unrestricted release (i.e., survey requirements, analytical requirements, no survey required, etc.). The unrestricted release approval signature for a Release Evaluation for Waste shall be a RE authorized to provide unrestricted release approval. In addition, the evaluation and unrestricted release approval signatures shall not be the same RE. The intent of this provision is to provide peer review of the evaluation and method of unrestricted release. It is important the RE take the peer review process seriously and not become a "rubber stamp" for their fellow engineer.

Release Evaluation for Property:

A Release Evaluation for Property requires an evaluation and unrestricted release approval signature. For a Release Evaluation for Property, the evaluation and unrestricted release signature may be the same RE. In the past, only one signature was required for property for which a RE could provide an unrestricted release on the basis of process knowledge/history.

Release Evaluation for Samples:

Samples are any waste or material that is being shipped to an off-site facility for analysis. Samples that may be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques may be authorized for shipment to an off-site facility using the signatory requirements specified for property. Samples which cannot be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques shall be authorized for shipment from the Site using the methodology specified for waste, i.e., second signature being provided by a RE authorized to perform peer review and approval for shipment.

The approval for transfer/shipment section of a Sample Release Evaluation (SRE) shall be revised as noted below for samples which cannot be provided with an unrestricted release.

"The samples specified in Part 1 of this release evaluation are being provided with authorization for transport as non-radioactive materials in accordance with Department of Transportation (49 CFR) regulation. This authorization for shipment does not constitute an unrestricted release."

Additional Documentation:

Number of lines per section may be modified or additional pages attached to ensure adequate documentation of information necessary to perform release evaluation.

Additional pages or attachments to a release evaluation shall have the evaluation number, Page __ of __, initials of Radiological Engineer signing approval for transfer/shipment and date.

§ 261.24

Table 1. -- Maximum Concentration of Contaminants for the Toxicity Characteristic

EPA No. ¹	HW	Contaminant	CAS No. ²	Regulatory Level (mg/L)
D004		Arsenic	7440-38-2	5.0
D005		Barium	7440-39-3	1000
D018		Benzene	71-43-2	0.5
D006		Cadmium	7440-43-9	1.0
D019		Carbon tetrachloride	56-23-5	0.5
D020		Chlordane	57-74-9	0.03
D021		Chlorobenzene	108-90-7	100.0
D022		Chloroform	67-66-3	6.0
D007		Chromium	7440-47-3	50
D023		o-Cresol	95-48-7	⁴ 200.0
D024		m-Cresol	108-39-4	⁴ 200.0
D025		p-Cresol	106-44-5	⁴ 200.0
D026		Cresol	—	⁴ 200.0
D016		2,4-D	94-75-7	10.0
D027		1,4-Dichlorobenzene	106-46-7	7.5
D028		1,2-Dichloroethane	107-06-2	0.5
D029		1,1-Dichloroethylene	75-35-4	0.7
D030		2,4-Dinitrotoluene	121-14-2	³ 0.13
D012		Endrin	72-20-8	0.02
D031		Heptachlor (and its epoxide)	76-44-8	0.008
D032		Hexachlorobenzene	118-74-1	³ 0.13
D033		Hexachlorobutadiene	87-68-3	0.5
D034		Hexachloroethane	67-72-1	3.0
D008		Lead	7439-92-1	5.0
D013		Lindane	58-89-9	0.4
D009		Mcury	7439-97-6	0.2
D014		Methoxychlor	72-43-5	10.0
D035		Methyl ethyl ketone	78-93-3	200.0
D036		Nitrobenzene	98-95-3	2.0
D037		Pentachlorophenol	87-86-5	100.0
D038		Pyridine	110-86-1	³ 5.0
D010		Selenium	7782-49-2	1.0
D011		Silver	7440-22-4	5.0
D039		Tetrachloroethylene	127-18-4	0.7
D015		Toxaphene	8001-35-2	0.5
D040		Trichloroethylene	79-01-6	0.5
D041		2,4,5-Trichlorophenol	95-95-4	400.0
D042		2,4,6-Trichlorophenol	88-06-2	2.0
D017		2,4,5-TP (Silverx)	93-72-1	1.0
D043		Vinyl chloride	75-01-4	0.2

¹ Hazardous waste number² Chemical abstracts service number³ Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.⁴ If o-, m-, and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used.

6/4/01

**ANALYTICAL SERVICES DIVISION
SAMPLING AND ANALYSIS REQUEST FORM**

ASD USE ONLY			
RIN	01S0083	Sampling TAT	Priority
ASD Project Lead	NIELSEN SKIP	Phone	4289
		Pager	3444

CUSTOMER INFORMATION			
Date:	06/01/2001	Owner ID:	D&D
Project Charge No	EED80120	Project Code	INDUSTRIAL AND SI
Requestor	SHAHER, MATTHEW	Phone	4375
		Pager	
Secondary Contact:	PARSONS, DUANE	Phone	6458
		Pager:	3734
Fax Data Results To:	SHAHER, MATTHEW	Fax:	6678
		2nd Fax:	

SAMPLE INFORMATION			
Sample Location:	B865, RM 145		
Sample Description, Identifiers, and Container ID Numbers	ONE SAMPLE LOCATION; 2 LIQUID AND 2 SLUDGE SAMPLES		Number of Events: 4
Sample Matrix:	<input checked="" type="checkbox"/> Aqueous <input type="checkbox"/> Org Liquid <input type="checkbox"/> Solid <input checked="" type="checkbox"/> Sludge <input type="checkbox"/> Multi Phase		
Planned Sampling Date:	06/06/2001	Date Data Required:	07/06/2001
90 Day Area?	<input type="radio"/> Yes <input checked="" type="radio"/> No	90-Day Start Date	90-Day End Date
Estimated Quantity Available for Sampling	100 GALLONS	WFC/IDC:	UNKNOWN
WSRIC ID	Waste Stream Name (if known)		
EPA Codes	UNKNOWN	MSDS	<input type="radio"/> Yes <input checked="" type="radio"/> No Attached: <input type="radio"/> Yes <input checked="" type="radio"/> No
Does the sample contain any known DOT hazardous materials/substances per 49CFR/172.101		<input type="radio"/> Yes <input checked="" type="radio"/> No	
If Yes, Describe.		<input type="radio"/> Unknown	

ANALYSES REQUESTED			
<input checked="" type="checkbox"/> Alpha/Beta Screen <input type="checkbox"/> Gross Alpha/Beta <input type="checkbox"/> Isotopes <input type="checkbox"/> g/l <input type="checkbox"/> Gamma Spec <input type="checkbox"/> Nitrate	VOAs <input type="checkbox"/> Total <input checked="" type="checkbox"/> TCLP SVOAs <input type="checkbox"/> Total <input checked="" type="checkbox"/> TCLP Metals: <input checked="" type="checkbox"/> Hg <input type="checkbox"/> Total <input checked="" type="checkbox"/> TCLP PCBs <input checked="" type="checkbox"/> Total <input type="checkbox"/> TCLP <input type="checkbox"/> Nitrite	<input type="checkbox"/> pH <input type="checkbox"/> Fingerprint <input type="checkbox"/> IR Analyses Criticality Sensitive? <input type="radio"/> Yes <input checked="" type="radio"/> No If Yes, <input type="radio"/> Single Analyses <input type="radio"/> Double	Other: MET-A-031(DOT) PEST/PCB Cyanide <input type="checkbox"/> Reactive <input type="checkbox"/> Amenable <input checked="" type="checkbox"/> Total <input type="checkbox"/> Sulfide <input type="checkbox"/> Sulfate Utah Lab Cert. Req'd <input type="radio"/> Yes <input checked="" type="radio"/> No SAP ID _____ IWCP # _____

RADIOLOGICAL ENTRY REQUIREMENTS			
Potential Rad Materials/Contamination	<input type="radio"/> Yes <input checked="" type="radio"/> No	Area Posting:	_____
Pre-Job Walkdown:	<input type="radio"/> Yes <input checked="" type="radio"/> No	Glovebox:	<input type="radio"/> Yes <input checked="" type="radio"/> No
RCT Support:	<input checked="" type="radio"/> Yes <input type="radio"/> No	Pre-Evolution Briefing:	<input type="radio"/> Yes <input checked="" type="radio"/> No
RWP Required	<input type="radio"/> Yes <input checked="" type="radio"/> No		
Radiological Evaluation (RE) Completed	<input type="radio"/> Yes <input checked="" type="radio"/> No	RE Number	_____
Rad Engineer Concurrence:	_____	RAM Transfer Tag Required:	<input checked="" type="radio"/> Yes <input type="radio"/> No
Comments: PLEASE CALL M SHAHER WITH ANY QUESTIONS (X4375)			

GENERAL ENTRY REQUIREMENTS/SAFETY CONCERNS			
<input checked="" type="checkbox"/> Plan of the Day <input type="checkbox"/> Confined Space <input type="checkbox"/> Asbestos	<input type="checkbox"/> Industrial Hygiene Assistance <input type="checkbox"/> Carcinogen Control Area	<input type="checkbox"/> IWCP <input type="checkbox"/> Personnel Monitoring	Other: _____

Requestor Signature: _____ Date: _____

Note: For samples going to Building 559, excess sample will be returned to generator

Commodore Advanced Sciences				CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C. # 01S0083#002	
RFETS				Page 1 of 3					
Sampler(s)		(date/time)		Contact/Requester		Telephone No.			
RUN 01S0083				SHAFER, MATU/NIELSEN, SKIP		4373/4289			
Project Title				Sampling Origin		Purchase Order/Charge Code			
BLDG. 865 (FLOOR TRENCH)				BLDG. 865 RM. 145 FL. TRENCH		BED50120			
To (Lab)				Logbook No.		Ice Chest No.		Temp.	
Lionville Laboratory Inc						BLD of Loading/Air Bill No.			
Protocol				Release COC (if any)		PRE			
POSSIBLE SAMPLE HAZARDS/REMARKS Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table III YES or NO Are other known hazardous substances present? YES or NO ** ** **				SCREENING REQUIRED <input type="checkbox"/>		SPECIAL INSTRUCTIONS Hold Time			
Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative, Packaging	
01S0083-001 005		AQUEOUS			BLDG. 865 RM 145 FLOOR TRENCH	1-L / AG / 1	SS02B008 (Semi VOA 8270B) [Routine]	None 4 degs C w/zh	
01S0083-001 006		AQUEOUS			BLDG. 865 RM 145 FLOOR TRENCH	1-L / AG / 1	SS02B008 (Semi VOA 8270B) [Routine]	None 4 degs C w/zh	
01S0083-001 007		AQUEOUS			BLDG. 865 RM 145 FLOOR TRENCH	1-L / AG / 1	SS02B008 (Semi VOA 8270B) [Routine]	None 4 degs C w/zh	
01S0083-001 008		AQUEOUS			BLDG. 865 RM 145 FLOOR TRENCH	1-L / G / 1	SS03B001 (PC BCLP-Water) [Routine]	None 4 degrees C	
01S0083-001 009		AQUEOUS			BLDG. 865 RM 145 FLOOR TRENCH	1-L / G / 1	SS03B001 (PC BCLP-Water) [Routine]	None 4 degrees C	
01S0083-001 010		AQUEOUS			BLDG. 865 RM 145 FLOOR TRENCH	40-ML / G / 1	SS01B005 (VOA 8260-Water) [Routine]	None 4 degs C w/zh	
01S0083-001 011		AQUEOUS			BLDG. 865 RM 145 FLOOR TRENCH	40-ML / G / 1	SS01B005 (VOA 8260-Water) [Routine]	None 4 degs C w/zh	
Relinquished By:		Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	
Relinquished By		Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	
Relinquished By		Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	
Relinquished By		Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process)					Disposed By		

88

Commodore Advanced Sciences				CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C.# 01S0083#002	
BIN 01S0083				Contact/Requester SHAFER, MATT / NIELSEN, SKIP				Telephone No. 43754289	
Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (res./pc/quantity)	Sample Analysis	Preservative, Packaging	Page 2 of 3
01S0083-001 012		AQUEOUS			BLDG. 865 RM. 145 FLOOR TRENCH	40-ML / G / 1	SS01B005 (VOA 8260-Water) [Routine]	None 4 degs C w/zhis	
01S0083-001 013		AQUEOUS			BLDG. 865 RM. 145 FLOOR TRENCH	1-L / G / 1	SS05C021 (Total 846 Metals w/Hg RDL-3) [Routine]	HNO3 4 degrees C	
01S0083-002 005		AQUEOUS			BLDG. 865 RM. 145 FLOOR TRENCH	1-L / AG / 1	SS02B008 (Semi VOA 8270B) [Routine]	None 4 degs C w/zhis	
01S0083-002 006		AQUEOUS			BLDG. 865 RM. 145 FLOOR TRENCH	1-L / AG / 1	SS02B008 (Semi VOA 8270B) [Routine]	None 4 degs C w/zhis	
01S0083-002 007		AQUEOUS			BLDG. 865 RM. 145 FLOOR TRENCH	1-L / AG / 1	SS02B008 (Semi VOA 8270B) [Routine]	None 4 degs C w/zhis	
01S0083-002 008		AQUEOUS			BLDG. 865 RM. 145 FLOOR TRENCH	1-L / G / 1	SS03B001 (PC BCLP-Water) [Routine]	None 4 degrees C	
01S0083-002 009		AQUEOUS			BLDG. 865 RM. 145 FLOOR TRENCH	1-L / G / 1	SS03B001 (PC BCLP-Water) [Routine]	None 4 degrees C	
01S0083-002 010		AQUEOUS			BLDG. 865 RM. 145 FLOOR TRENCH	40-ML / G / 1	SS01B005 (VOA 8260-Water) [Routine]	None 4 degs C w/zhis	
01S0083-002 011		AQUEOUS			BLDG. 865 RM. 145 FLOOR TRENCH	40-ML / G / 1	SS01B005 (VOA 8260-Water) [Routine]	None 4 degs C w/zhis	
01S0083-002 012		AQUEOUS			BLDG. 865 RM. 145 FLOOR TRENCH	40-ML / G / 1	SS01B005 (VOA 8260-Water) [Routine]	None 4 degs C w/zhis	
01S0083-002 013		AQUEOUS			BLDG. 865 RM. 145 FLOOR TRENCH	1 L / G / 1	SS05C021 (Total 846 Metals w/Hg RDL-3) [Routine]	HNO3 4 degrees C	
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	Date/Time	
FINAL SAMPLE DISPOSITION				Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process)				Deposited By	
								Date/Time	

89

Commodore Advanced Sciences				CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C.# 01S0083#002	
Contact/Requestor SHAFFER, MATT / NIELSEN, SKIP				Telephone No 43754239		Page 3 of 3			
Run	Bottle No	Customer Number	Mix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative, Packaging
01S0083-003 002			SOLID			BLDG. 865 RM. 145 FLOOR TRENCH	125-ML / AG / I	SS03B002 (PCB/Pest CLP-Solid) [Routine]	None 4 degress C
01S0083-003 003			SOLID			BLDG. 865 RM. 145 FLOOR TRENCH	125-ML / G / I	SS08C006 (TCLP Metals 1311) [Routine]	None 4 degress C
01S0083-003 004			SOLID			BLDG. 865 RM. 145 FLOOR TRENCH	60-ML / G / I	SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degress C w/zh
01S0083-003 005			SOLID			BLDG. 865 RM. 145 FLOOR TRENCH	125-ML / AG / I	SS08C011 (TCLP Semi VOA 1311/8270B) [Routine]	None 4 degress C w/zh
01S0083-004 002			SOLID			BLDG. 865 RM. 145 FLOOR TRENCH	125-ML / AG / I	SS03B002 (PCB/Pest CLP-Solid) [Routine]	None 4 degress C
01S0083-004 003			SOLID			BLDG. 865 RM. 145 FLOOR TRENCH	125-ML / G / I	SS08C006 (TCLP Metals 1311) [Routine]	None 4 degress C
01S0083-004 004			SOLID			BLDG. 865 RM. 145 FLOOR TRENCH	60-ML / G / I	SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degress C w/zh
01S0083-004 005			SOLID			BLDG. 865 RM. 145 FLOOR TRENCH	125-ML / AG / I	SS08C011 (TCLP Semi VOA 1311/8270B) [Routine]	None 4 degress C w/zh
01S0083-005 001			AQUEOUS			BLDG. 865 RM. 145 FLOOR TRENCH	40-ML / G / I	SS01B005 (VOA 8260-Water) [Routine]	None 4 degress C w/zh
01S0083-005 002			AQUEOUS			BLDG. 865 RM. 145 FLOOR TRENCH	40-ML / G / I	SS01B005 (VOA 8260-Water) [Routine]	None 4 degress C w/zh
01S0083-005 003			AQUEOUS			BLDG. 865 RM. 145 FLOOR TRENCH	40-ML / G / I	SS01B005 (VOA 8260-Water) [Routine]	None 4 degress C w/zh
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	Date/Time	Date/Time
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	Date/Time	Date/Time
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	Date/Time	Date/Time
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	Date/Time	Date/Time
FINAL SAMPLE DISPOSITION								Disposed By	
Disposal Method (e.g., estimated to customer, disposed of per lab procedure, used in analytical process)								Date/Time	

90

Commodore Advanced Sciences		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				COC # 01S0083#001		
RFETS						Page 1 of 1		
Sampler(s)	Contact/Requester		Telephone No.					
RUN 01S0083	SHAPER, MATT/NIELSEN, SKIP		43754289					
Project Title	Sampling Origin		Purchase Order/Charge Code					
BLDG. 865 (FLOOR TRENCH)	BLDG. 865 RM. 145 FL. TRENCH		JED50120					
To (Lab)	Logbook No.		Ice Chest No.		Temp.			
Building 559 Laboratory	Method of Shipment		Bill of Lading/Air Bill No.					
Protocol	Related COC (if any)		PRG					
POSSIBLE SAMPLE HAZARDS/REMARKS		SCREENING REQUIRED		SPECIAL INSTRUCTIONS		Hold Time		
Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table II? YES or NO		<input type="checkbox"/>						
Are other known hazardous substances present? YES or NO		<input type="checkbox"/>						
*** ** **								
Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative, Packaging
01S0083-001 001		AQUEOUS			BLDG 865 RM. 145 FLOOR TRENCH	20-ML / G / 1	PA04A006 (Radscreen - DOT) [Rush]	None
01S0083-002 001		AQUEOUS			BLDG 865 RM. 145 FLOOR TRENCH	20-ML / G / 1	PA04A006 (Radscreen - DOT) [Rush]	None
01S0083-003 001		SOLID			BLDG. 865 RM. 145 FLOOR TRENCH	20-ML / G / 1	PA04A015 (Radscreen - DOT) [Rush]	None
01S0083-004 001		SOLID			BLDG 865 RM. 145 FLOOR TRENCH	20-ML / G / 1	PA04A015 (Radscreen - DOT) [Rush]	None
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	
FINAL SAMPLE DISPOSITION		Disposed Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process)				Date/Time		

mon
mon has
used out



KAISER-HILL
COMPANY
ANALYTICAL SERVICES DIVISION

be, fe, K
but not a
problem

FAX COVER SHEET FOR FINAL DATA PACKAGE REPORTS

RIN NUMBER: 0150083 TCLP Mat

FROM: SKIP NIELSEN

PHONE: (303) 966-4289

FAX: (303) 966-8345

TO: M Shafer

FAX: 6078

PHONE: _____

NUMBER OF PAGES, INCLUDING COVER SHEET: _____

Please contact _____ if the fax is not received in its entirety.
(phone number)

NOTE:

This facsimile contains the results, in the Final Sample Data Package, for the analytes requested in this RIN. The package has been scheduled for verification or validation. Until verification or validation is completed the results must be considered preliminary. You will be forwarded a copy of the verification or validation report shortly after it is received by ASD. You should examine this report to determine if any qualifiers (flags) have been attached to the results. Flagged data may or may not be suitable for use as originally intended and should be evaluated for acceptability before use. If you have any questions please contact your Analytical Services Project Lead, do not contact the laboratory directly.

92



Analytical Report

Client : K-H RIN#01S0083

LVL# : 01061 204

W.O.# : 11830-001-001-9999-00

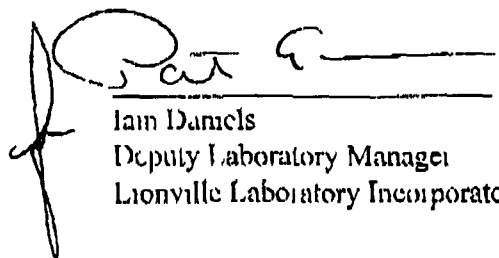
Date Received : 06-29-01

SW846 METALS

- 1 This narrative covers the analyses of 1 ICP leachate samples.
- 2 The samples were prepared and analyzed in accordance with SW-846 protocol and reported with CLP deliverable. All samples were prepared with a 10mL initial volume and a 100mL final volume resulting in a ten fold dilution due to low sample volume. With this dilution, the client requested limits were exceeded for Silver, Iron and Beryllium. These analytes are listed as analytes on the Universal Treatment Standards (UTS) List with the exception of Iron. The concentrations for these analytes are well below the UTS limits even with the dilution. Mercury was run and reported at a ten fold dilution and was below the RDL3 limit for Mercury. The client COC stated that the sample 01S0083-001 003 was a solid, however the sample received was a water with some suspended sediment according to Lionville Laboratory COC. Sample 01S0083-001 003S was rerun and reported at a five fold dilution for Barium.
- 3 ICVs, CCVs, and ICSs stock standards were purchased from Inorganic Ventures Laboratory and High Purity.
4. All analyses were performed within the required holding times.
- 5 The cooler temperature (3 0°C) has been recorded on the Chain of Custody.
- 6 All Initial and Continuing Calibration Verifications (ICV/CCVs) were within control limits.
- 7 All Initial and Continuing Calibration Blanks (ICB/CCBs) were within method criteria with the exception of Beryllium. CCB2 and CCB3 were above the RDL3 limit, however the results were below the UTS limits.
- 8 All preparation/method blanks were below the client requested limits found in RDL3 with the exception of MB2 for Beryllium, Mercury and Zinc and MB3 for Mercury, however the results were below the UTS limits. Refer to form 3.
9. All ICP Interference Check Standards were within control limits. Refer to form 4.

The results presented in this report relate only to the analytical testing, and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of **244** pages.

- 10 All laboratory control samples (LCS) were within the 80-120% control limits Refer to form 7
- 11 The serial dilution percent differences were within SW-846 control limits Refer to form 9
- 12 All duplicate analyses were within the 20% Relative Percent Difference (RPD) control limits Refer to form 6
- 13 All sample IDs were changed to accommodate the LPA naming convention which allows a maximum of 6 characters on all CLP Forms Refer to the comments section of form 1 for the original ID.
- 14 Recoveries on the Laboratory Summary Report and CLP forms will vary depending on the number of significant figures used in the recovery calculation.
- 15 The ICLP extract from sample 01S0083-001 003 was selected for the ICP metals matrix spike (MS) for this analytical batch The MS recoveries for the eight RCRA analytes and the additional regulatory metal analytes in the ICLP extract were above 50% as per method criteria The remaining analytes were not spiked Please refer to form 5
- 16 As of January 27, 2001, Reera LabNet Philadelphia became Lionville Laboratory Incorporated Some forms may still reference Reera LabNet Philadelphia


Ian Daniels
Deputy Laboratory Manager
Lionville Laboratory Incorporated

07-30-1
Date

rim/m06-204



Commodore Advance Sciences				CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				E.O.C.# 01S0083#6	
REETS				Page 1 of 1					
Sample Requester		Telephone No.		Sample Origin		Purchase Order/Charge Code			
BLDG. 865 RM. 145 FLOOR TRENCH		437-4289		BLDG. 865 RM. 145 FLOOR TRENCH		FED0120			
Logbook No.		Ice Chest No.		Method of Shipment		Bill of Lading/Air Bill No.			
99 Step Kan				Sample Team		4383 2127 5542			
Related COC (if any)		SCREENING REQUIRED		SPECIAL INSTRUCTIONS		Hold Time			
01S0083 #001		<input type="checkbox"/>							
Boiler No	Customer Number	Matrix	Date	Time	Location	Container (quantity/quantity)	Sample Analysis	Preservative Packing	
01S0083-001.002	01000204	SOLID	4/27/01	0812	BLDG 865 RM. 145 FLOOR TRENCH	125-ML / G / 1	SS03B002 (PCB/Pest CLP-Solid) [Routine]	None	4 degrees C
01S0083-001.003		SOLID		0826	BLDG 865 RM. 145 FLOOR TRENCH	125-ML / G / 1	SS08C006 (TCLP Metals 1311) [Routine]	None	4 degrees C
01S0083-001.004		SOLID		0918	BLDG 865 RM. 145 FLOOR TRENCH	80-ML / G / 1	SS08C010 (TCLP VOA 1311/8260) [Routine]	None	4 degs C w/zh
01S0083-001.005		SOLID		0814	BLDG 865 RM. 145 FLOOR TRENCH	125-ML / G / 1	SS08C011 (TCLP Sem VOA 1311/8270B) [Routine]	None	4 degs C w/zh
01S0083-002.001	01000203	AQUEOUS	4/27/01	0715	BLDG 865 RM. 145 FLOOR TRENCH	40-ML / G / 1	SS01B005 (VOA 8260-Water) [Routine]	None	4 degs C w/zh
01S0083-002.002		AQUEOUS			BLDG 865 RM. 145 FLOOR TRENCH	40-ML / G / 1	SS01B005 (VOA 8260-Water) [Routine]	None	4 degs C w/zh
01S0083-002.003		AQUEOUS			BLDG 865 RM. 145 FLOOR TRENCH	40-ML / G / 1	SS01B005 (VOA 8260-Water) [Routine]	None	4 degs C w/zh
Requested By	Date/Time	Received By	Date/Time	Retransmitted By	Date/Time	Received By	Date/Time	Date/Time	
AS. Bell 6-27-01 0725	6-27-01 0725	T130A REF #2	0725						
Requested By	Date/Time	Received By	Date/Time	Retransmitted By	Date/Time	Received By	Date/Time	Date/Time	
T130A Ref #2 6-27-01 0955	6-27-01 0955	th Chummen 6-27-01 0755	0755						
Requested By	Date/Time	Received By	Date/Time	Retransmitted By	Date/Time	Received By	Date/Time	Date/Time	
th Chummen 6-27-01 1500	6-27-01 1500	Fred Ex							
Requested By	Date/Time	Received By	Date/Time	Retransmitted By	Date/Time	Received By	Date/Time	Date/Time	
Fred Ex 6-29-01 9100	6-29-01 9100	Calor 6-29-01 9:00	9:00						
FINAL SAMPLE DEPOSITION	Disposal Method (e.g., returned to customer, disposed of per procedure, used in analytical process)								
Deposited By									Date/Time

U.S. EPA

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

001003

Lab Name: LIONVILLE LABORATORY Contract: 11830-1
 Lab Code: LVLI Case No.: 01S00 SAS No.: SDG No.: 001003
 Matrix (soil/water): WATER Lab Sample ID: 0106L204-005
 Level (low/med): LOW Date Received: 06/29/01
 % Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	966	B		P
7440-36-0	Antimony	29.2	B		P
7440-38-2	Arsenic	23.0	U		P
7440-39-3	Barium	39.9	B		P
7440-41-7	Beryllium	8.0			P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	17900	B		P
7440-47-3	Chromium	9.0	U		P
7440-48-4	Cobalt	8.0	U		P
7440-50-8	Copper	30.7	B		P
7439-89-6	Iron	3050			P
7439-92-1	Lead	26.0	U		P
7439-95-4	Magnesium	3540	B		P
7439-96-5	Manganese	106	B		P
7439-97-6	Mercury	1.0	U		AV
7440-02-0	Nickel	40.0	B		P
7440-09-7	Potassium	118000			P
7782-49-2	Selenium	26.0	U		P
7440-22-4	Silver	10.0	U		P
7440-28-0	Thallium	39.0	U		P
7440-62-2	Vanadium	8.9	B		P
7440-66-6	Zinc	151	B		P
7439-98-7	Molybdenum	27.7	B		P
7440-24-6	Strontium	91.5	B		P
7440-31-5	Tin	35.0	U		P
7439-93-2	Lithium	88.4	B		P
11-09-6	Uranium	107	U		P

Color Before: _____
 Color After: _____

Clarity Before: _____
 Clarity After: _____

Texture: _____
 Artifacts: _____

Comments:

01S0083-001.003

TCLP OF SAMPLE 002

FORM I - IN

3
BLANKS

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

FORM III - IN

3
BLANKS

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L_

[illegible]

FORM III - IN

3
BLANKS

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L_

[illegible]

FORM III - IN

99

6
DUPLICATES

EPA SAMPLE NO.

001003D

Contract: 11830-1

Case No.: 01500

SAS No.:

SDG No.: 001003

Level (low/med): LOW

% Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

[illegible]

FORM VI - IN

LABORATORY CONTROL SAMPLE

Aqueous LCS Source: IV

[illegible]

FORM VII - IN

LABORATORY ⁷ CONTROL SAMPLE

SDG No.: 001003

Aqueous LCS Source: IV

[illegible]



KAISER-HILL
COMPANY
ANALYTICAL SERVICES DIVISION

*Note:
Acetone and
2-butanol
not RCRA
constituents*

FAX COVER SHEET FOR FINAL DATA PACKAGE REPORTS

RIN NUMBER: 0150083

FROM: SKIP NIELSEN

PHONE: (303) 966-4289

FAX: (303) 966-8345

TO: M. Shaffer

FAX: 6678

PHONE: _____

NUMBER OF PAGES, INCLUDING COVER SHEET: _____

Please contact _____ if the fax is not received in its entirety.
(phone number)

NOTE:

This facsimile contains the results, in the Final Sample Data Package, for the analytes requested in this RIN. The package has been scheduled for verification or validation. Until verification or validation is completed the results must be considered preliminary. You will be forwarded a copy of the verification or validation report shortly after it is received by ASD. You should examine this report to determine if any qualifiers (flags) have been attached to the results. Flagged data may or may not be suitable for use as originally intended and should be evaluated for acceptability before use. If you have any questions please contact your Analytical Services Project Lead, do not contact the laboratory directly.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

01S0083#002

REETS

Page 1 of 1

Sample ID	01S0083#002	Client/Requester	STAEER, MATT/NIELSEN, SKIP	Telephone No.	43754189
RI		Sampling Origin	BLDG. 865 RM. 145 FL. TRENCH	Purchase Order/Charge Code	RED50120
Private Title		Logbook No.	99 Step 1/AN	Ice Chest No.	
To (Lab)	Lionville Laboratory Inc	Method of Shipment	Sample Team	Bill of Lading/Air Bill No.	4533 2127 5542
Protocol	CAS-808-003	Related COC (if any)	01S0083 #001	PRE	

POSSIBLE SAMPLE HAZARDS/REMARKS
 Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table 117 YES or NO
 Are other known hazardous substances present? YES or NO
 ** ** *

Boile No	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative, Packaging
01S0083-001.002	0100L204	SOLID	6/27/01	0812	BLDG. 865 RM. 145 FLOOR TRENCH	125-ML / AG / I	SS03B002 (PCB/Pest CLP-Solid) [Routine]	None
01S0083-001.003		SOLID		0826	BLDG. 865 RM. 145 FLOOR TRENCH	125-ML / G / I	SS08C006 (TCCLP Metals 1311) [Routine]	4 degress C
01S0083-001.004		SOLID		0918	BLDG. 865 RM. 145 FLOOR TRENCH	60-ML / G / I	SS08C010 (TCCLP VOA 1311/8260) [Routine]	None
01S0083-001.005		SOLID		0814	BLDG. 865 RM. 145 FLOOR TRENCH	125-ML / AG / I	SS08C011 (TCCLP Semi VOA 1311/8270B) [Routine]	4 degress C
01S0083-002.001	0100L203	AQUEOUS	6/27/01	0715	BLDG. 865 RM. 145 FLOOR TRENCH	40-ML / G / I	SS01B005 (VOA 8260-Water) [Routine]	None
01S0083-002.002		AQUEOUS			BLDG. 865 RM. 145 FLOOR TRENCH	40-ML / G / I	SS01B005 (VOA 8260-Water) [Routine]	4 degress C w/zhis
01S0083-002.003		AQUEOUS			BLDG. 865 RM. 145 FLOOR TRENCH	40-ML / G / I	SS01B005 (VOA 8260-Water) [Routine]	None
Relinquished By	6-27-01 0725	Date/Time	Received By	6-27-01 0925	Date/Time	Relinquished By	Received By	Date/Time
Relinquished By	6-27-01 0955	Date/Time	Received By	6-27-01 0955	Date/Time	Relinquished By	Received By	Date/Time
Relinquished By	6-27-01 1500	Date/Time	Received By	6-27-01 1500	Date/Time	Relinquished By	Received By	Date/Time
Relinquished By	6-27-01 1900	Date/Time	Received By	6-27-01 1900	Date/Time	Relinquished By	Received By	Date/Time
FINAL SAMPLE DISPOSITION	Disposed Method (e.g., returned to customer, disposed of per procedures, used in analytical process)							

605

Cust ID: 01S0083-002. 01S0083-002. VBLKGE BS

Sample Information	RFM#:	001	001 MS	001 MSD	01LVX216-MB1	01LVX216-MB1
	Matrix	WATER	WATER	WATER	WATER	WATER
	D F :	5.00	5.00	5.00	1.00	1.00
	Units:	UG/L	UG/L	UG/L	UG/L	UG/L

Surrogate	Recovery	1,2-Dichloroethane-d4 Toluene-d8 Bromofluorobenzene	94 %	99 %	101 %	117 %	102 %	99 %	101 %	114 %	96 %
Dichlorodifluoromethane	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
Chloromethane	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
Vinyl Chloride	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
Bromomethane	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
Chloroethane	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
Trichlorofluoromethane	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
1,1,1-Dichloroethene	25 U	25 U	73 %	25 U	25 U	25 U	77 %	25 U	25 U	25 U	80 %
Carbon Disulfide	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
Acetone	460	570	520	520	520	520	520	520	520	520	10 U
Methylene Chloride	22 JB	65 B	84 B	84 B	84 B	84 B	84 B	84 B	84 B	84 B	14 B
Trans-1,2-dichloroethene	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
1,1,1-Dichloroethane	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
Cis-1,2-dichloroethene	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
2,2,2-Dichloropropane	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
2-Butanone	270	350	320	320	320	320	320	320	320	320	10 U
Bromochloromethane	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
Chloroform	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
1,1,1-Trichloroethane	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
Carbon Tetrachloride	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
1,1,1-dichloropropene	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
Benzene	25 U	101 %	105 %	105 %	105 %	105 %	105 %	105 %	105 %	105 %	106 %
1,1,1,2-Dichloroethane	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
Trichloroethene	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	101 %
1,2-Dichloropropane	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
Dibromomethane	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
Bromodichloromethane	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
Cis-1,3-Dichloropropene	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	5 U
4-Methyl-2-pentanone	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	10 U
Toluene	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	107 %

Outside of EPA CLP QC limits

* = Outside of EPA CLP CC Limits

31

R/W Batch Number 0106L203 Client K-H RIN#01S0083 Work Order 11830001001 Page 1b
Cust ID 01S0083-002. 01S0083-002. 01S0083-002. VELKGE BS VELKGE BS
001 001 001 001 MSD 01LVX216-MB1 01LVX216-MB1

RFM#:

Trans-1,3-Dichloropropene	25	U	25	U	25	U	5	U	5	U
1,1,2-Trichloroethane	25	U	25	U	25	U	5	U	5	U
Tetrachloroethene	25	U	25	U	25	U	5	U	5	U
1,3-Dichloropropane	25	U	25	U	25	U	5	U	5	U
2-Hexanone	33	J	39	J	48	J	10	U	10	U
Dibromochloromethane	25	U	25	U	25	U	5	U	5	U
1,2-Dibromoethane	25	U	25	U	25	U	5	U	5	U
Chlorobenzene	25	U	104	%	109	%	5	U	111	%
1,1,1,2-Tetrachloroethane	25	U	25	U	25	U	5	U	5	U
Ethylbenzene	25	U	25	U	25	U	5	U	5	U
1,3- and 1,4-Xylene	25	U	25	U	25	U	5	U	5	U
1,2-Xylene	25	U	25	U	25	U	5	U	5	U
Xylenes (total)	25	U	25	U	25	U	5	U	5	U
Styrene	25	U	25	U	25	U	5	U	5	U
Bromoform	25	U	25	U	25	U	5	U	5	U
Isopropylbenzene	25	U	25	U	25	U	5	U	5	U
Bromobenzene	25	U	25	U	25	U	5	U	5	U
1,2,3-Trichloropropene	25	U	25	U	25	U	5	U	5	U
1,1,2,2-Tetrachloroethane	25	U	25	U	25	U	5	U	5	U
N-propylbenzene	25	U	25	U	25	U	5	U	5	U
2-Chlorotoluene	25	U	25	U	25	U	5	U	5	U
4-Chlorotoluene	25	U	25	U	25	U	5	U	5	U
1,3,5-Trimethylbenzene	25	U	25	U	25	U	5	U	5	U
Tert-butylbenzene	25	U	25	U	25	U	5	U	5	U
1,2,4-Trimethylbenzene	25	U	25	U	25	U	5	U	5	U
Sec-butylbenzene	25	U	25	U	25	U	5	U	5	U
1,3-Dichlorobenzene	25	U	25	U	25	U	5	U	5	U
1,4-Dichlorobenzene	25	U	25	U	25	U	5	U	5	U
4-Isopropyltoluene	25	U	25	U	25	U	5	U	5	U
1,2-Dichlorobenzene	25	U	25	U	25	U	5	U	5	U
N-butylbenzene	25	U	25	U	25	U	5	U	5	U
1,2-Dibromo-3-chloropropane	25	U	25	U	25	U	5	U	5	U
1,2,4-Trichlorobenzene	25	U	25	U	25	U	5	U	5	U
Hexachlorocyclopentadiene	25	U	25	U	25	U	5	U	5	U
Naphthalene	25	U	25	U	25	U	5	U	5	U
1,2,3-Trichlorobenzene	25	U	25	U	25	U	5	U	5	U
1,1,2-Trichlorotrifluoroethane	25	U	25	U	25	U	5	U	5	U

* = Outside of EPA CLP limits

107

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: Lionville Laboratory Inc Contract 11830-001-001-9999-00
Lab Code: LVLI Case No. SAS No.. SDG No 06L203
Lab File ID. X070904 Lab Sample ID: 01LVX216-MB1
Date Analyzed 07/09/1 Time Analyzed 1120
Matrix: (soil/water) WATER Level (low/med) LOW
Instrument ID: 5970X

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	01S0083-002 001	0106L203-001	X070906	1232
02	VBLKCEBS	01LVX216-MB1S	X070907	1307
03	01S0083-002.001MS	0106L203-001S	X070908	1344
04	01S0083-002 001MSD	0106L203-001T	X070909	1420
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS

108

1A
VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO

0150083-002 001

Lab Name Lionville Labs, Inc. Contract 11830001001Lab Code Lionvi Case No. SAS No SDG No Matrix (soil/water) WATERLab Sample ID 01061203-001Sample wt/vol: 5.00 (g/mL) MLLab File ID x070906Level (low/med) LOWDate Received 06/29/01% Moisture not dec Date Analyzed 07/09/01Column (pack/cap) CAPDilution Factor: 5.00

CAS NO. COMPOUND CONCENTRATION UNITS
(ug/L or ug/Kg) UG/L

75-71-8-----	Dichlorodifluoromethane	25	U
74-87-3-----	Chloromethane	25	U
75-01-4-----	Vinyl Chloride	25	U
74-83-9-----	Bromomethane	25	U
75-00-3-----	Chloroethane	25	U
75-69-4-----	Trichlorofluoromethane	25	U
75-35-4-----	1,1-Dichloroethane	25	U
75-15-0-----	Carbon Disulfide	25	U
67-64-1-----	Acetone	460	
75-09-2-----	Methylene Chloride	22	JB
156-60-5-----	Trans-1,2-dichloroethene	25	U
75-34-3-----	1,1-Dichloroethane	25	U
156-59-2-----	Cis-1,2-dichloroethene	25	U
590-20-7-----	2,2-Dichloropropane	25	U
78-93-3-----	2-Butanone	270	
74-97-5-----	Bromochloromethane	25	U
67-66-3-----	Chloroform	25	U
71-55-6-----	1,1,1-Trichloroethane	25	U
56-23-5-----	Carbon Tetrachloride	25	U
563-58-6-----	1,1-dichloropropene	25	U
71-43-2-----	Benzene	25	U
107-06-2-----	1,2-Dichloroethane	25	U
79-01-6-----	Trichloroethene	25	U
78-87-5-----	1,2-Dichloropropane	25	U
74-94-3-----	Dibromomethane	25	U
75-27-4-----	Bromodichloromethane	25	U
10061-01-5-----	cis-1,3-Dichloropropene	25	U
108-10-1-----	4-Methyl-2-pentanone	50	U
108-88-3-----	Toluene	25	U
10061-02-6-----	Trans-1,3-Dichloropropene	25	U
79-00-5-----	1,1,2-Trichloroethane	25	U
127-18-4-----	Tetrachloroethene	25	U
142-28-9-----	1,3-Dichloropropane	25	U
591-78-6-----	2-Hexanone	33	J

FORM 1 V-1

1/87 Rev.

1B
VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO

01S0083-002 001

Lab Name: Lionville Labs, Inc. Contract. 11830001003Lab Code Lionva Case No. SAS No. SDG No. Matrix. (soil/water) WATERLab Sample ID. 0106L203-001Sample wt/vol 5.00 (g/mL) MLLab File ID: x070906Level (low/med) LOWDate Received 06/29/01% Moisture not dec Date Analyzed 07/09/01Column. (pack/cap) CAPDilution Factor 5.00

CAS NO. COMPOUND CONCENTRATION UNITS,
(ug/L or ug/Kg) UG/L

124-48-1	Dibromochloromethane	25	U
106-93-4	1,2-Dibromoethane	25	U
108-90-7	Chlorobenzene	25	U
630-20-6	1,1,1,2-Tetrachloroethane	25	U
100-41-4	Ethylbenzene	25	U
108-38-3	1,3- and 1,4-Xylene	25	U
95-47-6	1,2-Xylene	25	U
1330-20-7	Xylenes (total)	25	U
100-42-5	Styrene	25	U
75-25-2	Bromoform	25	U
98-82-8	Isopropylbenzene	25	U
108-86-1	Bromobenzene	25	U
96-18-4	1,2,3-Trichloropropane	25	U
79-34-5	1,1,2,2-Tetrachloroethane	25	U
103-65-1	N-propylbenzene	25	U
95-49-8	2-Chlorotoluene	25	U
106-43-4	4-Chlorotoluene	25	U
108-67-8	1,3,5-Trimethylbenzene	25	U
98-06-6	Tert-butylbenzene	25	U
95-63-6	1,2,4-Trimethylbenzene	25	U
135-98-8	Sec-butylbenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
99-87-6	4-Isopropyltoluene	25	U
95-50-1	1,2-Dichlorobenzene	25	U
104-51-8	N-butylbenzene	25	U
96-12-8	1,2-Dibromo-3-chloropropane	25	U
120-87-1	1,2,4-Trichlorobenzene	25	U
87-68-3	Hexachlorobutadiene	25	U
91-20-3	Naphthalene	25	U
87-61-6	1,2,3-Trichlorobenzene	25	U

FORM 1 V-2

1/87 Rev

1D
VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO

01S0083-002 001

Lab Name Lionville Labs, Inc. Contract. 11830001001Lab Code Lionvi Case No. _____

SAS No. _____ SDG No. : _____

Matrix (soil/water) WATERLab Sample ID 01061203-001Sample wt/vol 5.00 (g/mL) MLLab File ID x070906Level (low/mod) LOWDate Received 06/29/01

% Moisture, not dec. _____

Date Analyzed 07/09/01Column (pack/cap) CAPDilution Factor: 5.00

CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) <u>UG/L</u>
---------	----------	--

76-13-1-----	1,1,2-Trichlorotrifluoroethane	25	U
--------------	--------------------------------	----	---

FORM 1 V-3

1/87 Rev.

1E
VOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

01S0083-002 001

Lab Name Lionville Labs, Inc Contract 11830001001Lab Code Lionvi Case No. _____

SAS No. _____ SDG No. _____

Matrix, (soil/water) WATERLab Sample ID 0106L203-001Sample wt/vol 5.00 (g/mL) MLLab File ID: x070906Level (low/med) LOWDate Received: 06/29/01

% Moisture not dec. _____

Date Analyzed 07/09/01Column, (pack/cap) CAPDilution Factor: 5.00Number TICs found: 0CONCENTRATION UNITS
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1				

ORIGINAL COPY

BERYLLIUM RELEASE SCREEN (BRS) FORM (Page 1 of 2)

NOTE Attach completed BRS Form to the Material Transfer**PART I****SENDER/CUSTODIAN**Description of the item or Lot Nine ballasts that came from the Stainless Steel Welding Glovebox located in Building 865 Room 145

- 1 Are items in the Beryllium Shop (Bldg 444) or known to have been used in beryllium operations?
☐ Yes ☒ No

If yes, complete Part III of this form

- 2 Are items in a room on the "RFETS Rooms with Present Beryllium Contamination"
 (http://rfets/S&IH/berylliu.htm)
☒ Yes ☐ No

If yes, complete Part III of this form

- 3 Are items in a beryllium building, but not on the "RFETS Rooms with Present Beryllium Contamination" list?
☐ Yes ☒ No

If yes, complete Part II of this form

If the answers to questions 1, 2 and 3 above are all "No", sign below designating that all items can be free released with no further action

- 1) By signing below, I acknowledge answers provided in Part I to be true and correct
 2) By signing below, I acknowledge items to be free-releasable

Sender/Custodian

Ext 6184 Pager 5977**PART II****APPROVAL FOR TRANSFER/SHIPMENT WITHOUT SAMPLING**

- 1) Have the specified items ever been in a room on the "RFETS Rooms with Present Beryllium Contamination" list in a manner in which beryllium could have come in contact with the items or have any other potential for beryllium contamination?

☐ Yes ☐ No

If yes, complete Part III of this form

If no, document the historical knowledge that the items have no potential for beryllium contamination and attach to this form

By signing below, I certify the information provided in Part I and II of the BRS to be true and correct

Sender/Custodian N/A Emp No Date Ext Pager

I have discussed with the Sender/Custodian the RFETS Rooms with Present Beryllium Contamination list, potential contamination scenarios for beryllium contamination, and potential hazards associated with beryllium exposure. The attached documentation states that there is no potential for beryllium contamination.

Building Industrial Hygienist N/A Emp No Date Ext Pager

The items specified above are being provided with an unrestricted release from beryllium contamination and may be transferred to PU&D

OS&IH PM CBDPP , 081000, Appendix 9, Revision 1,

Description of the item or Lot Ballasts from Stainless Steel Welding Glovebox, Building 865 Room 145

Building Manager N/A Emp No _____ Date _____ Ext _____ Pager _____

ORIGINAL

Property History/Sampling Information

Building 865 has historically housed Beryllium Operations and the entire facility is currently classified as a Beryllium Contaminated Area. Room 145 is on the "RFETS Rooms with Present Beryllium Contamination" list, even though the Stainless Steel Welding Glovebox that the ballasts were removed from was never used in beryllium operations. The ballasts were housed under an enclosed light housing on top of the glovebox and were wet wiped. The ballasts are sealed units where there would be no concern of internal beryllium contamination. There is a total of nine ballasts removed from the area.

A beryllium surface wipe sample was collected on each of the nine ballasts. None of the samples had detectable levels of beryllium upon the wipe samples (see attached survey).

ORIGINAL!!

BERYLLIUM RELEASE SCREEN (BRS) FORM (Page 2 of 2)

PART III

DISAPPROVAL FOR SHIPMENT WITHOUT SAMPLING

I have completed this form and find that the items cannot be released based on the above information and require sampling according to the "Guidance for Following the CBDPP Equipment Release" or disposal according the CBDPP

Sender/Custodian

Ext 6184 Pager 5977

Complete Part IV

PART IV

APPROVAL FOR SHIPMENT BASED ON PROCESSING
ALTERNATIVES OR SAMPLING RESULTS

Attach the description and justification of the lot and the results of sampling to this form and include this form with items when transferring items to PU&D

By signing below, I certify that the items have been processed following the OS&IHPM Chapter 28, CBDPP and sampled using a statistical sampling methodology and have met the beryllium free release criteria

Sender/Custodian

Ext 6184 Pager 5977

I have reviewed the results of sampling in accordance with OS&IHPM Chapter 28 and certify that the items meet the Beryllium free release criteria

Bldg Industrial Hygien

Date 3/26/01 Ext 2406 Pager 3218

PART V

DISAPPROVAL FOR SHIPMENT BASED ON SAMPLING RESULTS

Attach results of sampling to this form and include form with items to ensure proper disposal as waste

I have reviewed the results of sampling in accordance with OS&IHPM Chapter 28 and certify that the items **DO NOT** meet the Beryllium free release criteria

Bldg Industrial Hygienist N/A Emp No _____ Date _____ Ext _____ Pager _____

115

Rocky Flats Environmental Technology Site Beryllium Wipe Sample Log

Sample Prefix

RIN #

Bldg - 865-03212001-01 -
Date - IH#

01D0623

Lab: Johns Manville

Example 865-09022000-310

WCP# LabID# 01032208

Sampler (print)
Employee #
Signature

[Signature]

Sample Sequence #	Room	Point on surface map	Location	Result
16	146		Ballast #1	<0.1
17	146		Ballast #2	<0.1
18	146		Ballast #3	<0.1
19	146		Ballast #4	<0.1
20	146		Ballast #5	<0.1
21	146		Ballast #6	<0.1
22	146		Ballast #7	<0.1
23	146		Ballast #8	<0.1
24	146		Ballast #9	<0.1
25	—		BLANK	<0.1
26	146		light bulbs mar	<0.1
27	146		light bulbs ma	<0.1
28	146		light bulbs ma	<0.1
NOTE All of this equipment was removed				
Welding Glovebox located in Room				

mg/filter

ORIGINAL

Shaded area = 100cm²

Checked By (print/sign) *MSR/MLP* Empl # *51548* Date *3/24/01*

116



COVER PAGE

March 23, 2001

Rocky Flats Environmental Technology Site
Ms Shelly Johnsen
P O Box 464, Building 881
Golden, CO 80402-0464

Laboratory Report ID 01032208
Laboratory Name JMTC IH Analytical Laboratory
Laboratory Code JMANS
Subcontract Number 800188SX6
RIN 01D0623
Requestor LeeAnn Holwager
P O /Charge Code EEC50021

Dear Ms Johnsen

The Johns Manville Technical Center (JMTC) has performed the following analytical services as requested. The results are calculated based upon the information supplied on the submission form. All laboratory data has been filed and are available upon request. The JMTC IH Analytical Laboratory is accredited by the American Industrial Hygiene Association (AIHA) in the industrial hygiene program (Certificate No 056) and participates in the AIHA ELPAT program. If you have any questions, please call (303) 978-2584.

Scope of Work

Requested Analysis	Bottle Number(s)	Customer Number(s)	Laboratory ID Number	Line Item Code	Sample Matrix
Beryllium	01D0623-001 001	865-03212001-01-16	01032208-001	NR01A001	WIPE
Beryllium	01D0623-002 001	865-03212001-01-17	01032208-002	NR01A001	WIPE
Beryllium	01D0623-003 001	865-03212001-01-18	01032208-003	NR01A001	WIPE
Beryllium	01D0623-004 001	865-03212001-01-19	01032208-004	NR01A001	WIPE
Beryllium	01D0623-005 001	865-03212001-01-20	01032208-005	NR01A001	WIPE
Beryllium	01D0623-006 001	865-03212001-01-21	01032208-006	NR01A001	WIPE
Beryllium	01D0623-007 001	865-03212001-01-22	01032208-007	NR01A001	WIPE
Beryllium	01D0623-008 001	865-03212001-01-23	01032208-008	NR01A001	WIPE
Beryllium	01D0623-009 001	865-03212001-01-24	01032208-009	NR01A001	WIPE
Beryllium	01D0623-010 001	865-03212001-01-25	01032208-010	NR01A001	WIPE
Beryllium	01D0623-011 001	865-03212001-01-26	01032208-011	NR01A001	WIPE
Beryllium	01D0623-012 001	865-03212001-01-27	01032208-012	NR01A001	WIPE
Beryllium	01D0623-013 001	865-03212001-01-28	01032208-013	NR01A001	WIPE

Comments: No problem were encountered with sample receiving and sample analysis

I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard-copy sample package and the computer-readable EDD, as applicable, submitted on diskette or by modem, has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature:

Scott A Steiner
Industrial Hygiene Project Manager

Date

117

March 23, 2001

Laboratory Report ID 01032208
Laboratory Name JMTc IH Analytical Laboratory
Laboratory Code JMANS
Subcontract Number 800188SX6
RIN 01D0623
Requestor LeeAnn Holwager
P O /Charge Code EEC50021

QUICK RESULTS SUMMARY

Line Item Code NR01A001
Sample Matrix WIPE
Analytical Method OSHA ID-125G

Reporting Limit 0.1 µg
Date Received 03/22/01
Date Analyzed 03/23/01

Customer Number	Laboratory ID Number	Requested Analysis	CONCENTRATION			T	Q	Constituent ID
			Backup	Main	Total			
865-03212001-01-16	01032208-001	Beryllium			< 0.1 µg	TR1	U	7440-41-7
865-03212001-01-17	01032208-002	Beryllium			< 0.1 µg	TR1	U	7440-41-7
865-03212001-01-18	01032208-003	Beryllium			< 0.1 µg	TR1	U	7440-41-7
865-03212001-01-19	01032208-004	Beryllium			< 0.1 µg	TR1	U	7440-41-7
865-03212001-01-20	01032208-005	Beryllium			< 0.1 µg	TR1	U	7440-41-7
865-03212001-01-21	01032208-006	Beryllium			< 0.1 µg	TR1	U	7440-41-7
865-03212001-01-22	01032208-007	Beryllium			< 0.1 µg	TR1	U	7440-41-7
865-03212001-01-23	01032208-008	Beryllium			< 0.1 µg	TR1	U	7440-41-7
865-03212001-01-24	01032208-009	Beryllium			< 0.1 µg	TR1	U	7440-41-7
865-03212001-01-25	01032208-010	Beryllium			< 0.1 µg	TR1	U	7440-41-7
865-03212001-01-26	01032208-011	Beryllium			< 0.1 µg	TR1	U	7440-41-7
865-03212001-01-27	01032208-012	Beryllium			< 0.1 µg	TR1	U	7440-41-7
865-03212001-01-28	01032208-013	Beryllium			< 0.1 µg	TR1	U	7440-41-7

White - Return to Originator	Yellow - Lab Copy	Green - Sample Custodian	Blue - Originator
------------------------------	-------------------	--------------------------	-------------------

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA									Survey Type Alpha, Beta contamination		
Mfg	Eberline	Mfg	Eberline	Mfg	NE	Building	865				
Model	SAC-4	Model	SAC-4	Model	Electra	Location	Room 146				
Serial #	809	Serial #	818	Serial #	1393	Purpose	REN survey for Be smears				
Cal Due	8-19-01	Cal Due	6-27-01	Cal Due	6-14-01	RWP #	N/A				
Bkg	0.2 cpm α	Bkg	0.4 cpm α	Bkg	2.0 cpm α						
Eff	33.3 % α	Eff	33.3 % α	Eff	20.7 % α						
MDA	20 dpm α	MDA	20 dpm α	MDA	55 dpm α						
Mfg	Eberline	Mfg	Eberline	Mfg	NE	Date	3-22-01	Time	0750		
Model	BC-4	Model	BC-4	Model	Electra						
Serial #	961	Serial #	775	Serial #	1393						
Cal Due	12-28-01	Cal Due	12-1-01	Cal Due	6-14-01	ECT Name	Signature Employee #				
Bkg	43.6 cpm β	Bkg	40.4 cpm β	Bkg	65.4 cpm β						
Eff	25 % β	Eff	25 % β	Eff	34.8 % β						
MDA	200 dpm β	MDA	200 dpm β	MDA	437 dpm β						
						N/A	/	N/A	/	N/A	
						ECT Name	Signature Employee #				

PRN/REN # 010124T130C-002

Comments: Survey pts (14) and (15) were taken on the external surface of the plastic transport bag. Isotope of concern for building 865 is depleted uranium (U-238)

SURVEY RESULTS

COPY

ALPHA

BETA

SWIPE	LOCATION	SWIPE	DIRECT	WIPE	SWIPE	DIRECT	WIPE
#	Be smear # denoted below	DPM/100CM2	DPM/100CM2	DPM/WIPE	DPM/100CM2	DPM/100CM2	DPM/WIPE
1	865-03212001-01-16	<20	N/A	N/A	<200	N/A	N/A
2	865-03212001-01-17	<20	N/A	N/A	<200	N/A	N/A
3	865-03212001-01-18	<20	N/A	N/A	<200	N/A	N/A
4	865-03212001-01-19	<20	N/A	N/A	<200	N/A	N/A
5	865-03212001-01-20	<20	N/A	N/A	<200	N/A	N/A
6	865-03212001-01-21	<20	N/A	N/A	<200	N/A	N/A
7	865-03212001-01-22	<20	N/A	N/A	<200	N/A	N/A
8	865-03212001-01-23	<20	N/A	N/A	<200	N/A	N/A
9	865-03212001-01-24	<20	N/A	N/A	<200	N/A	N/A
10	865-03212001-01-25	<20	N/A	N/A	<200	N/A	N/A
11	865-03212001-01-26	<20	N/A	N/A	<200	N/A	N/A
12	865-03212001-01-27	<20	N/A	N/A	<200	N/A	N/A
13	865-03212001-01-28	<20	N/A	N/A	<200	N/A	N/A
14	Front of transport bag	<20	<72	N/A	<200	<401	N/A
15	Back of transport bag	<20	<72	N/A	<200	<401	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Date Reviewed 3/22/01 RS Supervision

Print Name

Signature

Emp #

RELEASE EVALUATION FORM

Page 1 of 3

Release Evaluation No :010124 T130C-002 EXTENDED YES EXPIRES:DECEMBER 31, 2001 Charge No : _____

PART I
ACKNOWLEDGMENT

SENDER/CUSTODIAN

Description of Property/Waste/Sample To Be Released/Transferred LAPEL AIR SAMPLES AND SWIPES

Current Location. BUILDING 881, 865, 883, 444, 440, 460, 886, 664, 447, 448, 991, 906, 774, 569, 750 Pad, 904 pad, 374, 788, 779, 371, 771, 551, 662, 910, 709, 995, 569, 707, 711, 125, 119, 128, 127, T452A, T452B, T452C, T452D, T452F, 452, 443, 441, T441A, 442L, 442W, 428, 428B

Destination JOHN MANVILLE TECHNICAL CENTER, PO BOX 625005 LITTLETON COLORADO 80162-5005

New Recipient/Custodian : JOHN MANVILLE TECHNICAL CENTER, PO BOX 625005 LITTLETON COLORADO 80162-5005

History/Process Knowledge. THE AIR SAMPLES ARE TAKEN IN DUPLICATE, ONE OF WHICH WILL BE SURVEYED PER RSP 7.02 AND REPRESENT THE ACTIVITY OF THE ACTUAL SAMPLE THAT WILL BE SENT INDUSTRIAL HYGIENE WILL ENSURE THAT THE AIRFLOW OF THE DUPLICATE FILTER IS EQUAL TO OR GREATER THAN THE ACTUAL FILTER THAT IS TO BE SENT TO A OFF-SITE FACILITY. THE SWIPES ACTIVITY WILL BE READ PER RSP 7 02

Has the specified material ever been in an RMMA/RBA/CA or contacted DOE controlled radioactive materials? UNKNOWN

- 1) By signing below, I certify information provided in Part I of this release evaluation to be true and accurate
- 2) By signing below, I agree to comply with the specific requirements noted in Part II of this release evaluation

Sender/Custodian

Date, 01/24/01

Ext: 6727



RSFORMS-9.01-01

SPECIFIC REQUIREMENTS AND/OR COMMENTS

1. The Radiological Control Technician shall surface contamination survey of the duplicate air sample cassette and the duplicate air filter per RSP 7.02. All surveys shall be recorded for both loose surface contamination for both alpha and beta emitters. -
2. ACCEPTANCE CRITERIA FOR THE EXTERNAL PORTIONS OF THE LAPEL AIR SAMPLER SHALL NOT EXCEED 20 DPM/100cm² OR 1000 DPM/100cm².
3. ACCEPTANCE CRITERIA FOR SWIPES TO BE SHIPPED SHALL NOT EXCEED 20 DPM/100cm²
4. ACCEPTANCE CRITERIA FOR THE DUPLICATE AIR FILTER SHALL NOT EXCEED 20 DPM PER FILTER
5. THE RCT SHALL PERFORM CONTAMINATION SURVEYS PER RSP 7.02 on the external of each shipping package. ACCEPTANCE CRITERIA SHALL NOT EXCEED 20 DPM/100cm² (ALPHA) OR 1000 dpm/100cm² (beta)
6. Beta surveys are not required if the facility has on record an Technical Basis Document exempting the need for Beta monitoring.

6. The sender/custodian will provide all data to radiological engineering if any filter/swipe is above criteria listed in section above. Radiological Engineering may average the complete shipment, if the shipment average is below the criteria listed above then the radiological engineer will sign the surveys annotating that material may be shipped.

7. The sender/custodian shall retain and make available to Radiological Engineering, the chain of custody and survey records for all sample shipped under the terms and conditions of the release evaluation. The sender custodian shall provide the shipper a copy of the survey and this Release Evaluation along with the samples being sent to the analytical laboratory. This release will meet the DOT (49 CFR) requirements of less than 2 nanocuries per gram

8. 4. JOHN MANVILLE TECHNICAL CENTER OPERATES UNDER COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT RADIOACTIVE MATERIAL LICENSE 131-03 THAT EXPIRES ON MAY 31, 2003

9. CASI will ensure that all requirements of this release evaluation have been satisfied prior to shipping.

10. CASI will retain all P/WRE DATA PACKAGES FOR AUDITING PURPOSES

11. IF any of the acceptance criteria listed above are exceeded the sender/custodian may utilize Release Evaluation 010124-T130C-001

12 THIS IS A UNRESTRICTED RELEASE

Evalu

Date 5/12/01 Ext. 6285

APPROVAL FOR TRANSFER/SHIPMENT

Approved

Date 5/12/01 Ext 5909

SAMPLE RELEASE 010124-T130C-002

122

Release Evaluation for Waste:

A Release Evaluation for Waste requires an evaluation and unrestricted release approval signature. The evaluation signature is by the Radiological Engineer (RE) providing the methods or criteria for unrestricted release (i.e., survey requirements, analytical requirements, no survey required, etc.) The unrestricted release approval signature for a Release Evaluation for Waste shall be a RE authorized to provide unrestricted release approval. In addition, the evaluation and unrestricted release approval signatures shall not be the same RE. The intent of this provision is to provide peer review of the evaluation and method of unrestricted release. It is important the RE take the peer review process seriously and not become a "rubber stamp" for their fellow engineer.

Release Evaluation for Property:

A Release Evaluation for Property requires an evaluation and unrestricted release approval signature. For a Release Evaluation for Property, the evaluation and unrestricted release signature may be the same RE. In the past, only one signature was required for property for which a RE could provide an unrestricted release on the basis of process knowledge/history

Release Evaluation for Samples:

Samples are any waste or material that is being shipped to an off-site facility for analysis. Samples that may be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques may be authorized for shipment to an off-site facility using the signatory requirements specified for property. Samples which cannot be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques shall be authorized for shipment from the Site using the methodology specified for waste, i.e., second signature being provided by a RE authorized to perform peer review and approval for shipment.

The approval for transfer/shipment section of a Sample Release Evaluation (SRE) shall be revised as noted below for samples which cannot be provide with an unrestricted release.

"The samples specified in Part 1 of this release evaluation are being provided with authorization for transport as non-radioactive materials in accordance with Department of Transportation (49 CFR) regulation. This authorization for shipment does not constitute an unrestricted release"

Additional Documentation:

Number of lines per section may be modified or additional pages attached to ensure adequate documentation of information necessary to perform release evaluation.

Additional pages or attachments to a release evaluation shall have the evaluation number, Page of , initials of Radiological Engineer signing approval for transfer/shipment and date.



CC Y

A Jacobs Engineering Group Company

Interoffice Memorandum

DATE March 1, 2001
TO Jerry Anderson, RISS Project, Bldg T886A, X6438
FROM Lee Ann Holwager, RISS Project – IH&S, Bldg T886A, X2406 *Just*
SUBJECT ASBESTOS SAMPLE RESULTS, BUILDING 865 – LAH-008-01

Industrial Hygiene and Safety (IH&S) collected a bulk sample of floor tile on February 19, 2001 to determine whether it contained asbestos. The sample was from 9"X9" tan floor tile located in Building 865 Room 101 in front of door 1. Sample results indicate the floor tile contains 5% chrysotile.

When the sample was collected there was some damage to the 9"X9" floor tile in the area, cracking and breakage along the edge of approximately 4 tiles. After the sample was collected, the damaged area was covered with 6" duct tape. It is IH&S opinion that the floor tile is in a safe configuration as long as the damaged area remains taped until it can be abated.

If you have any questions regarding this matter, please feel free to contact me.

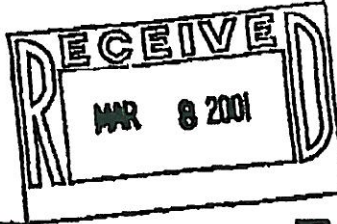
Cc
M J Adams
R J Bittenger
865 IH&S

124

ROCKY FLATS PLANT INDUSTRIAL HYGIENE BULK SAMPLE FORM

ROCKY FLATS PLANT INDUSTRIAL HYGIENE BULK SAMPLE FORM				
1 Sample # (Bldg-Y-M-D-P#-S#) 865 02 19 2001 01 10	through _____ SINGLE <input checked="" type="checkbox"/> MULTIPLE <input type="checkbox"/>			
2. Process Title Characterization of damaged floor tile	6 Analytical Sample Method PLM			
3 Subprocess Title N/A	7 Lab Report # Reservoirs RES 75404-1			
4 Building/OU Etc 865	8 Lab Method PLM			
5 Chain of Custody Seal # 01R0155	9 Related Forms none			
10 Sample # (Bldg-Y-M-D-P#-S#)	11 Location Information	12 Material Type	13 Bulk Sample Description	14 Results
865-02192001-01-10	Bldg Room 101 just in front of door 1	Floor tile	Grey tile 9x9 (B) with yellow resin (A)	A: ND Asbestos B: 5% Chrysotile
15 Sampled by/Date LeeAnn Holwager 2/19/01	16 Checked by/Date (Check Back of Form) C. Baker 02/28/01			

NVLAP LAB NO. 101005

ASBESTOS - TEM, PCM, PLM, SEM
METALS - AA, FLAME/FURNACE
AMBIENT PARTICULATES
SPECIAL PARTICLE ANALYSIS

ADNA LAB ID 101033

RESERVOIRS ENVIRONMENTAL SERVICES, INC.

1827 GRANT STREET

DENVER, COLORADO 80203-1167

(303) 676-7374

(303) 830-1986

FAX (303) 663-0155

March 2, 2001

Mr. Chuck Hoelzel
Kaiser-Hill Analytical Services Division
Rocky Flats Environmental Technology Site
10808 Highway 93, Unit B - Bldg. 881
Golden, CO 80403-8200

Dear Mr. Hoelzel:

Reservoirs Environmental Services, Inc. (RES, Inc.) has analyzed one bulk material sample by Polarized Light Microscopy (PLM) for asbestos content as per your request and results were telephoned to your office. PLM was used to analyze the bulk materials in compliance with guidelines established by the USEPA (EPA/600/R-93/116). The Analytical Results are presented in Table I

RES Job# 75404-1 has been assigned to this study. This report is considered highly confidential and the sole property of Kaiser-Hill Analytical Services Division RES, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. Samples will be disposed of after sixty days unless longer storage is requested.

The US EPA guideline was developed for use on friable building materials and recommends the use of additional analyses for non-friable materials such as floor tiles. RES, Inc. recommends additional analyses to confirm negative PLM results on floor tiles. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. If you should have any questions about this report, please feel free to call me at 830-1986.

Sincerely,

Jeanne Spencer Orr
President

MW/jh

Analyst(s):
Paul D. LoScalzo
Paul F. Knapp

Liu Wenlong
Rich Wegrzyn

DOES NOT CONTAIN
OFFICIAL USE ONLY INFORMATION

Name/Org
EMCBE, Class Date 10/6/05
OK for public release

01/01/05

126

RESERVOIRS ENVIRONMENTAL SERVICES, INC.

NVLAP Accredited Laboratory #1896 TDH 30-0138

Page 1 of 1

TABLE I. PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number:

RES 75404-1

Client:

Kaiser-Hill Analytical Services Division

Client Project:

01R0155, Learn Hohenweg

Date Samples Received:

February 21, 2001

Analysis Type:

PLM Short Report, Bulk

Turnaround:

3-5 Day

Client Sample Number	Lab ID Number	Layer	Physical Description	Portion of Total Sample (%)	ASBESTOS CONTENT BY LAYER Mineral Visual Estimate (%)	Non-Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
865-02192001-01-10	EM 527053	A Yellow resin B Tan tile		5 95	Chrysotile ND 5	0 0	100 95

ND = None Detected

TR = Traces, < 1% Visual Estimate

Trem-Ac = Tremolite-Actinolite

Point Count Traces = Observed but not countable under protocol, < 0.25%

Analyst: JPK

PDL
Data DA

127

RESERVOIRS ENVIRONMENTAL SERVICES, INC.
PLM ASBESTOS ANALYSIS - LAB BLANK/RECOUNT

Lab Sample#: 75404 RES #: 327053

Prepared By: _____ Date Prepared: _____

SUB-PART:	A	B	C	D
PERCENT:	<u>5</u>	<u>85</u>		

ASBESTOS FIBERS

CHRYSTOTILE

AMOSITE

CROCIDOLITE

TREMOLITE-ACTINOLITE

ANTHOPHYLLITE

TOTAL ASBESTOS

	<u>15</u>		
	<u>0</u>	<u>4</u>	

PART: PHYSICAL DESCRIPTION:

A	<u>YELL RESIN</u>
B	<u>TAN TILE</u>
C	
D	

ORIGINAL ANALYZED BY: [Signature]

DATE ANALYZED: 2/27/01

QC ANALYZED BY: [Signature]

DATE ANALYZED: 2/27/01



Commodore Advanced Sciences				CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C.# 01R0155#001	
RFETS								Page 1 of 1	
Sampler(s) LEE ANN HOLWAGER		Contact/Requester JOHNSON, SHELLEY		Telephone No. 6401					
BIN 01R0155		Sampling Origin 865		Purchase Order/Change Code FEC50021					
Project Title 865 BULK ASBESTOS		Legbook No. N/A		Job Client No. N/A		Temp. N/A			
To (Lab) Reservoirs Environmental		Method of Shipment HAND DELIVER		Bill of Lading/Air Bill No. N/A					
Protocol		Retained COC (if any)		SPECIAL INSTRUCTIONS		HOLD TIME			
POSSIBLE SAMPLE... HAZARDS/REMARKS		SCREENING REQUIRED		Container (size/type/quantity)		Sample Analysis		Preservative, Packaging	
Are acid preserved samples DOT hazardous per 40 CFR Part 156.3 Table III YES or NO		<input type="checkbox"/>		1-N/A / N/A / 1		IH02B004 (offsite Asbestos-bulk PLM N9002) [Routine]		N/A	
Are other known hazardous substances present? YES or NO								None	
00 00 00									
01R0155-001.001	Customer Number 865-02192001-01-10	Matrix IH	Date 02/19/2001	Time 7:00 AM	Location 865				
AC 2/19/01						Received By		Date/Time	Date/Time
						Received By		Date/Time	Date/Time
						Received By		Date/Time	Date/Time
						Received By		Date/Time	Date/Time
Requisitioned By						Requisitioned By		Date/Time	Date/Time
Requisitioned By						Requisitioned By		Date/Time	Date/Time
Requisitioned By						Requisitioned By		Date/Time	Date/Time
Requisitioned By						Requisitioned By		Date/Time	Date/Time
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., returned to container, disposed of per lab procedure, used in analytical process)				Disposed By		Date/Time	

129

Golden, CO 80402-0464

Safety and Hygiene Chain of Custody Record and Analysis Request

[illegible]

☐ Property ☐ Waste ☒ Sample

RELEASE EVALUATION FORM

Page 1 of 3

Release Evaluation No.: 010220-T886A-001 EXTENDED: NO EXPIRES.: _____ Charge No.: n/a

PART I SENDER/CUSTODIAN ACKNOWLEDGEMENT

COPY

Description of Property/Waste/Sample To Be Released/Transferred

Tile sample & mastic taken from front entry way of B865

Current Location B865

Destination Reservoirs Environmental Laboratories, Denver, CO

New Recipient/Custodian Reservoirs Environmental Laboratories, Denver, CO

History/Process Knowledge. The materials described in this release evaluation were located in the front office area (entry-way) of B865 This area undergoes routine radiological surveys and has never shown areas of elevated radioactivity over the past several years There is little or no concern for radiological contamination on the floor tile in this area

Has the specified material ever been in an RMMA/RBA/CA or contacted DOE controlled radioactive materials? NO

- 1) By signing below, I certify information provided in Part I of this release evaluation to be true and accurate
- 2) By signing below, I agree to comply with the specific requirements noted in Part II of this release evaluation

Sender/Cust

[Redacted Signature]

Date 2/20/01 Ext 2406

PART II RADIOLOGICAL ENGINEERING

SPECIFIC REQUIREMENTS AND/OR COMMENTS.

SURVEY REQUIRED

The samples listed below will require fixed radiological surveys

SAMPLE NOS 865-02192001-01-10

RCT perform a representative survey in accordance with RSP 07 02 of the surface of each sample Obtain total surface activity measurements for alpha & beta activity Removable activity will not be measured due to the nature of the samples (i.e., tile and mastic are smaller than 100 cm² and do not lend themselves to removable surveys) A PAT survey alone will provide radiological information on the nature of this sample

Radiological Engineer Review radiological surveys And if survey documentation is below the required limits, process release evaluation to indicate an unrestricted free-release

Evaluated

[Redacted Signature]

Date 2-20-01 Ext 3461 Pager 2581

Radiological Engineer
Rock Nevean

APPROVAL FOR TRANSFER/SHIPMENT

Approve

[Redacted Signature]

Date 02/21/01 Ext 5909 Pager 2079

Radiological Engineer

PROPERTY/WASTE RELEASE EVALUATION SIGNATURE REQUIREMENTSRelease Evaluation #: 010220-T886A-001 Page 2 of 3**COPY****Release Evaluation for Waste:**

A Release Evaluation for Waste requires an evaluation and unrestricted release approval signature. The evaluation signature is by the Radiological Engineer (RE) providing the methods or criteria for unrestricted release (i.e., survey requirements, analytical requirements, no survey required, etc.). The unrestricted release approval signature for a Release Evaluation for Waste shall be a RE authorized to provide unrestricted release approval. In addition, the evaluation and unrestricted release approval signatures shall not be the same RE. The intent of this provision is to provide peer review of the evaluation and method of unrestricted release. It is important the RE take the peer review process seriously and not become a "rubber stamp" for their fellow engineer.

Release Evaluation for Property:

A Release Evaluation for Property requires an evaluation and unrestricted release approval signature. For a Release Evaluation for Property, the evaluation and unrestricted release signature may be the same RE. In the past, only one signature was required for property for which a RE could provide an unrestricted release on the basis of process knowledge/history.

Release Evaluation for Samples:

Samples are any waste or material that is being shipped to an off-site facility for analysis. Samples that may be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques may be authorized for shipment to an off-site facility using the signatory requirements specified for property. Samples which cannot be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques shall be authorized for shipment from the Site using the methodology specified for waste, i.e., second signature being provided by a RE authorized to perform peer review and approval for shipment.

The approval for transfer/shipment section of a Sample Release Evaluation (SRE) shall be revised as noted below for samples which cannot be provided with an unrestricted release.

"The samples specified in Part 1 of this release evaluation are being provided with authorization for transport as non-radioactive materials in accordance with Department of Transportation (49 CFR) regulation. This authorization for shipment does not constitute an unrestricted release."

Additional Documentation:

Number of lines per section may be modified or additional pages attached to ensure adequate documentation of information necessary to perform release evaluation.

Additional pages or attachments to a release evaluation shall have the evaluation number, Page ___ of ___, initials of Radiological Engineer signing approval for transfer/shipment and date.

132

PRN/REN #: 010220-T886A-001 Page 3 of 3

SURVEY RESULTS

COPY

Print Name

Signature _____

CONCLUSIONS

133

Denis Seltz 5592
Gil Cordova

Management Union Safety Team
Safety Observation Card

Location of Issue: 816 Date Occurred/Identified: 2-14-01
Observation: Steel Workers Doffing Respirators
Incorrectly in DE area. Steel workers cutting
conduit without RCT support. Cutting pipe
without wetting conduit cut with wire in
pipe and not labeled. No following plant
standard concern about asbestos tile + Abatement
(989)

10/10/01
10/10/01
10/10/01
10/10/01

Optional Information:	
Employee Name:	<u>Rae Stockham James Kloverstrom</u>
Bldg./Mail Stop:	<u>Phone: Pg 212-1656</u>
<input checked="" type="checkbox"/> Please call and follow-up with me <input type="checkbox"/> No follow-up necessary	

SAFETY, it's a must!

134/134